

745 D2740 (2)

Day	
Ornament & Its	
Application	
Acc. No.	138099

745 D 2740 (2)

KEEP YOUR CARD IN THIS POCKET

Books will be issued only on presentation of proper library cards.

Unless labeled otherwise, books may be retained for four weeks. Borrowers finding books marked, defaced or mutilated are expected to report same at library desk; otherwise the last borrower will be held responsible for all imperfections discovered.

The card holder is responsible for all books drawn on his card.

No books issued unless penalties are paid.

Lost cards and change of residence must be reported promptly:



PUBLIC LIBRARY
KANSAS CITY, MO.

KEEP YOUR CARD IN THIS POCKET

REDHEFFER ENVELOPE CO., KANSAS CITY, MO.



24 10'25

9 10'28

7Ja'30

8AP'31

No 28

4Ag'32

JAN 11 '50

JAN 08 1993

FEB 04 1993

ORNAMENT &
ITS APPLICATION
LEWIS F. DAY

COMPANION VOLUME BY THE SAME AUTHOR

PATTERN DESIGN

A BOOK FOR STUDENTS TREATING IN A PRACTICAL WAY OF THE ANATOMY, PLANNING, AND EVOLUTION OF REPEATED ORNAMENT

OTHER WORKS

SOME PRINCIPLES OF EVERY-DAY ART. SECOND EDITION.

NATURE IN ORNAMENT. THIRD EDITION.

WINDOWS: A BOOK ABOUT STAINED GLASS.

SECOND EDITION.

ART IN NEEDLEWORK: A BOOK ABOUT EMBROIDERY.

SECOND EDITION.

ALPHABETS OLD & NEW. FOURTH IMPRESSION.

LETTERING IN ORNAMENT.

MOOT POINTS: FRIENDLY DISPUTES UPON ART AND INDUSTRY, in conjunction with WALTER CRANE.

ORNAMENT & ITS APPLICATION

A BOOK FOR STUDENTS
TREATING IN A PRACTICAL
WAY OF THE RELATION
OF DESIGN TO
MATERIAL, TOOLS AND
METHODS OF WORK BY

LEWIS F. DAY

AUTHOR OF PATTERN
DESIGN, NATURE IN ORNAMENT,
LETTERING IN ORNAMENT,
ALPHABETS,

&c.

LONDON, B.T. BATSFORD
NEW YORK, SCRIBNER'S SONS
1904

PRINTED AT THE DARLEN PRESS,
EDINBURGH.

PREFACE.

THIS book is based (like "Pattern Design") upon the foundation of an earlier volume. But, though it covers the ground of "the Application of Ornament," now out of print, it covers a larger area. It is really a new book. Here and there a fragment of the earlier one is incorporated in it; but even that has been shaped anew; for it seemed, looking back upon the work of fifteen years ago, there was little in it which could not be more simply said. The aim of "Ornament and its Application" is throughout practical. It appeals, however, less exclusively than some of my books to students of design; in fact, it is addressed to all who are really interested in ornament. To those not practically acquainted with the subject, it may serve as introduction to that quality of *workmanlikeness* which to a workman is of the very essence of design.

What I have endeavoured to do is, to show the clear and close relation of design to workmanship; to arouse interest in a side of art which, regarding it in the rather forbidding light of "technique," lovers of art are accustomed to dismiss from their minds as no concern of theirs; and so to open their eyes to what is indeed a never-failing source of interest in art.

Much of what is said will of course be familiar to artists

and workmen practically engaged in design. To them I can only hope to open out perhaps a wider view of the limits of their craft; to show the difference between certain arts, crafts or trades commonly grouped together, and the likeness between others not usually regarded as in any way connected; and, generally, to stimulate workers in the arts to a more comprehensive study of their particular subject.

"Ornament and its Application" will be found to contain a great deal of information at once necessary to the student and interesting to the more general reader; but that is rather by the way. Its purpose is not to cram the student with knowledge, profitable only in proportion as it comes to him through personal experience or individual study; not so much to inform the reader as to stir in him a desire to inform himself; to indicate how much there is in ornament which nearly concerns him, did he but know it; to set him a-thinking and a-seeking, and to suggest directions in which search will be fruitful. If, when all is said, and read, he is still unconvinced that ornament is dependent upon conditions, perhaps purely practical; that the various styles of ornament, "historic," as we call them, grew to a great extent out of such conditions; and that the secret of appropriate design is in cheerful obedience to them, I have failed, so far as he is concerned, in the purpose of my book.

With regard to the illustrations, there remained constantly something of interest to be told about them which was not relevant to the point apropos to which they are referred to in the text. This, whether it refers to the source of the work, its author, date, country, or present whereabouts, its

colour or the detail of its execution, will be found in the comparative and explanatory index of illustrations.

A friendly critic of "Pattern Design" found fault with it that it did not discuss the appropriateness of pattern to the process of its execution. The subject was purposely reserved for the present volume. The relation of ornament to natural form is, again, the subject of a separate treatise.

LEWIS F. DAY.

15 TAVITON STREET,
GORDON SQUARE, W.C.,
1st September 1904.

CONTENTS.

CHAPTER	PAGE
I. INTRODUCTORY - - - -	I
II. CONVENTIONAL TREATMENT - - -	6
III. APPLIED ART - - - - -	14
IV. THE CHARACTER WHICH COMES OF TREAT- MENT - - - - -	25
V. THE TEACHING OF THE TOOL - - -	70
VI. AGAINST THE GRAIN - - - -	125
VII. WHERE TO STOP - - - - -	140
VIII. WHERE TO STOP (<i>Continued</i>) - - -	157
IX. MORE THAN ENOUGH - - - -	172
X. FROM PROCESS TO PROCESS - - -	182
XI. ALLIED PROCESSES - - - - -	203
XII. LIKE TO LIKE - - - - -	232
XIII. PARTNERSHIPS - - - - -	241
XIV. PRACTICAL DESIGN - - - - -	260
XV. OBEDIENT ORNAMENT - - - - -	267
XVI. THE ADAPTATION OF ORNAMENT TO RE- PETITION - - - - -	281
XVII. THE POSSIBLE PALETTE - - - -	292
XVIII. THE INEVITABLE LINE - - - -	297
INDEX - - - - -	313

COMPARATIVE & EXPLANATORY INDEX OF ILLUSTRATIONS.

B. M. = *British Museum.* V. & A. M. = *Victoria and Albert Museum.*

ANIMAL FORMS IN ORNAMENT. See	FIGURE
INCISED STONE - - - - - - -	276
IVORY - - - - - - -	247
WALL-PAPER - - - - - - -	274
WOVEN PATTERN - - - - - - -	26, 272, 273
APPLIQUÉ EMBROIDERY. BED FURNITURE. The pattern on the strip to the left, and the ground of that to the right, cut out of one piece of velvet, and laid on to the paler figured silk ground. Venetian, <i>ca.</i> 1550. V. & A. M. - - -	
	219
See also	
EMBROIDERY - - - - - - -	47
PATCHWORK - - - - - - -	155
BASKET-WORK, African - - - - - - -	
	65
BLOWN GLASS. See	
GLASS - - - - - - -	15, 24, 25
BOOKBINDING. See	
CUT LEATHER - - - - - - -	104
FILIGREE - - - - - - -	223
LEATHER BINDING - - - - - - -	166, 70, 252, 121, 227
ONLAI D LEATHER - - - - - - -	285
ONLAY - - - - - - -	226
SILVER GILT - - - - - - -	199, 262
TOOLING - - - - - - -	123
BOULLE. See	
INLAY - - - - - - -	217

BRASS WRITING-BOX LID, engraved, the ornament bright upon a blackened ground. Cashmere. V. & A. M.	- -	182
BRASSHEADED NAIL WORK.—From a chest covered with Russia leather and mounted with brass. English. Seventeenth century	- - - - -	229
BRICK. WALL DECORATION, with enamels or glazes separated by raised outline. From the Palace of Darius at Susa. Assyrian. Louvre	- - - - -	1
BROCADE. See		
WOVEN PATTERN	- - - - -	29, 76, 34
BRONZE.		
CANDLESTICK encrusted with silver. Arab. Fifteenth century. Spitzer Collection	- - - - -	164
DETAIL FROM A SCREEN in the Cathedral of Prato. Brunelleschi?	- - - - -	101
PORTABLE FONT, cast, hammered, and chased. French? Twelfth century. Spitzer Collection	- - - - -	17
See also		
HANDLE	- - - - -	19
ONLAY	- - - - -	282
BROOCHES of the safety pin type. Ancient Irish. B.M.	-	11
BRUSHWORK. See		
DIAGRAM	- - - - -	214
LETTERING	- - - - -	62
POTTERY	- - - - -	7, 144, 39, 38
BYZANTINE ORNAMENT from the Church of Theotokos, Constantinople	- - - - -	172
CABINET in oak. French. Sixteenth century. (V. & A. M. ?)		126
CARVED SANDSTONE glazed with vitreous enamels. Turkestan. V. & A. M.	- - - - -	178
CARVING. See		
MARBLE, STONE, WOOD CARVING, &c.		
CARPET. See		
WOVEN PATTERN	- - - - -	26

CHAINS. See	FIGURE
GOLDSMITH'S WORK - - - - -	22
CHAMPLEVÉ AND CLOISONNÉ ENAMEL.	
BLENDED COLOURS. Italian. Eleventh century. B.M. -	186
ITALIAN. Eleventh century. B.M. - - - - -	188
CHAMPLEVÉ	
ENAMEL. Blended colours. German. Twelfth century. B.M.	187
ENAMEL. Bronze. French. Thirteenth century. B.M. -	185
ENAMEL. Designs by Johannes Baptist? Constantino. 1615	183
See also	
INCISED - - - - -	147
INLAY - - - - - 191, 192, 193, 189, 194, 190	
PIERCED BOWL - - - - -	196
POTTERY - - - - -	2, 51
CHASING. See	
SILVER - - - - -	110, 109
SILVER GILT - - - - -	262
CHIP CARVING. Side of a box in the form of a book. Bought in Spain - - - - -	81
CHISELLING. See	
IRON - - - - -	98, 100, 99, 162
CIRCLE. See	
DIAGRAMS - - - - -	264, 265, 266
CIRCULAR ceremonial fan or Flabellum with carved ivory handle. In the Bargello at Florence. Twelfth century. Also diagrams to illustrate the rings and radiating lines which the decoration of a circular space is apt to follow - - - - -	263
CLOISONNÉ.	
ENAMEL ON COPPER. The cloisons of twisted wire, the enamel opaque blue, green, yellow, and black on a white ground. Part of a bookcover. Russian. V. & A. M. -	198
See also	
CHAMPLEVÉ - - - - -	186, 188
INLAY - - - - -	184, 200, 201, 197
COUNTERCHANGE PATTERN. Mosaic and inlay - -	53
See also	
MOSAIC - - - - -	54

CRYSTAL HANAP, cut and mounted in enamelled gold.			
Italian. Sixteenth century. Spitzer Collection	-	-	102
CUT LEATHER bookbinding. Hungarian	-	-	104
CUT LINEN with needlepoint insertion. Italian. Seventeenth century. V. & A. M.	-	-	75
See also			
LACE	-	-	43
DAMASCENING.			
DESIGN slightly enlarged from original. Sixteenth century	-		181
See also			
DESIGNS	-	-	281
ONLAY	-	-	282
DAMASK. See			
WOVEN PATTERN	-	-	72
DARNING upon handmade net. Old Hungarian	-	-	27
DESIGNS for damascening in silver, or etching on steel.			
German. Sixteenth century. Virgil Solis	-	-	281
DIAGRAM			
OF THE LINES on which the decoration of the circle may be set out. 1. Ringed. 2. Bisymmetrical. 3. Rayed. 4. Diamond. 5. Pentagon-flowing. 6. Hexagon-flowing. 7, 8. Cruciform. 9. Ring on lines of the cross. 10. Flowing round. 11. Flowing in opposite directions. 12. Flowing	-		264
SHOWING cruciform construction of design. The unit of repeat = $\frac{1}{4}$ of the whole. But for the interlacing of the pattern it would work as $\frac{1}{8}$ repeat, turning over	-	-	265
SHOWING lines on which the decoration of the circle may be set out	-	-	266
TO SHOW how the consideration of ties may affect design. The upper border is a brushwork pattern which can equally well be stencilled. When it came to the stencilling of the <i>ground</i> instead of the ornament, the necessary modification of the forms led to something like a new design	-	-	214
See also			
CIRCULAR CEREMONIAL FAN	-	-	263

DOOR.

FIGURE

OAK, carved and inlaid, and clamped with pierced and enamelled iron. William Burges. Latter part of nineteenth century - - - - - 251

WOODEN. From S. Gengoult, Toul. Gothic. France - - - 66

See also

JOINERY - - - - - 10

WOOD CARVING - - - - - 261, 163, 88

EMBOSSSED

AND LACQUERED leather. Designed by Stephen Webb - 125

LEATHER CASE. Italian. Sixteenth century. Spitzer Collection 105

WALL-PAPER, gilt and lacquered. L. F. D. - - - 42

See also

EMBROIDERY - - - - - 106

ENAMELLED CANDLESTICK - - - - - 269

GOLD CUP - - - - - 80

GOLDSMITH'S WORK - - - - - 78

IRON - - - - - 245, 6

SILVER - - - - - 109, 108, 107, 110

EMBROIDERY.

IN OUTLINE with portions of the ground tinted by partial darning - - - - - 270

IN SILVER and silver gilt thread on crimson velvet, from Stapleton Church, Shropshire. Second half of the sixteenth century - - - - - 286

OR QUILTING. Pattern in blue and gold thread stitched down upon red satin. Italian. Sixteenth century - - - 106

SATIN STITCH on canvas, following the lines of the mesh. Chinese - - - - - 28

SILK APPLIQUÉ in various colours upon deep purple velvet, outlined in couched gimp, and gold and silver thread. Spanish. Sixteenth century. V. & A. M. - - - 47

See also

APPLIQUÉ - - - - - 219

DARNING - - - - - 27

LACE - - - - - 46

LEATHER - - - - - 154

PATCHWORK - - - - - 155

ENAMEL. See	FIGURE
CHAMPLEVÉ - - - - -	186, 188, 187, 185
CLOISONNÉ - - - - -	198
ENAMELLED CANDLESTICK, painted in translucent enamel and gold. Limoges. Jean Flambeau. Sixteenth century. Spitzer Collection - - - - -	269
FILIGREE	
OF SILVER GILT WIRE enclosing jewels "au cabochon." From a processional cross at Hildesheim. Romanesque - -	222
OF SILVER WIRE, flat and twisted on a gilt ground. Part of a bookcover. German. Seventeenth century. B.M. -	223
FRET. See	
GLASS - - - - -	250
IRON - - - - -	206, 203, 280, 245
JOINERY - - - - -	209
PIERCED - - - - -	202
STAINED GLASS - - - - -	195
FRETTED	
BOXWOOD comb inscribed "de bon cœur je le donne." French. Sixteenth century. Spitzer Collection - - -	205
LEATHER from a shoe. White over green, stitched down with strips of gilded leather. Found in Britain. Roman. B.M.	220
OAK VALLANCE. L. F. D. - - - - -	204
GESSO.	
GILDED. From a cassone. Italian. Fifteenth century. V. & A. M. - - - - -	114
SHIELD. The charge painted, the background gilded. Italian. V. & A. M. - - - - -	115
GLASS.	
BLOWN. Greek. B.M. - - - - -	24
BLOWN. Oriental flask. Old Venetian glass with spots of opaque yellow enamel. Common Italian fiasco. V. & A. M.	133
BLOWN. Venetian. 1520. V. & A. M. - - - - -	25
BLOWN into a pierced silver cup, giving the effect of sapphires "en cabochon." Late Roman. B.M. - - - - -	250

GLASS—*Continued.*

FIGURE

BLUE AND WHITE MARBLING. Cut out of the solid conglomerate. North Italian. Eleventh century. Spitzer Collection	- - - - -	59
BOTTLE. Alabastos. From a Greek tomb. Decorated with onlaid threads of coloured glass, drawn up and down into a zigzag pattern. Phœnician. Fifth century B.C. V. & A. M.		235
BOTTLE. White, with threads of white and coloured glass onlaid in the form of a scroll. In parts pressed down in the molten state with a tool. Greek. B.M.	- - -	236
CLEAR WHITE, decorated with strips of opaque white, alternately plain and twisted. Blown. Venetian. <i>ca.</i> 1600. V. & A. M.	- - - - -	15
CUP with ribs of glass onlaid and pattern in white enamel and gold. Venetian. End of fifteenth century. Spitzer Collection	- - - - -	231
CUT IN THE MANNER OF CRYSTAL. German. Thirteenth century. Nuremberg Museum	- - - - -	103
DRINKING CUP of greenish white with onlaid streaks of glass indented in the molten state with a tool. Anglo-Saxon? B.M.	- - - - -	233
DRINKING CUP, whitish, with threads and other appliqué of green glass. Spanish. V. & A. M.	- - - - -	234
DRINKING VESSEL, green, with "prunts" softened in the fire. Metal foot. Flemish. Seventeenth century	- - -	142
DRINKING VESSEL, greenish white, with "prunts." German. Seventeenth century. B.M.	- - - - -	141
SHALLOW CUP. The outside moulded with scale pattern. White. Inside, in the centre, the arms of France and Brittany. Louis XII. Venetian. Early sixteenth century. Spitzer Collection	- - - - -	116
VESSEL with ribs of glass onlaid. Émile Gallé of Nancy. Modern	- - - - -	232
See also		
GLAZING	- - - - -	9
INLAY	- - - - -	255
MOSAIC	- - - - -	118
GLAZING in white glass, the leads forming the pattern of the window. L. F. D.	- - - - -	9
See also		
STAINED GLASS	- - - - -	283

GOLDSMITH'S WORK.

FIGURE

1. Chain of gold beads with dependent ornaments inlaid with precious stones. Cloisonné. Egyptian.	
2. Gold chain with globular dependent ornaments. Greek or Græco-Roman.	
3. Gold beads with dependent crocodiles in embossed gold, alternating with drops of lapis. Egyptian.	
4. Chain of stars. Gold. Late Greek.	
5. Twisted ribbons of gold, one ornamented with seeds of gold grouped to form flowers. Finest Greek period.	
6. Chain of silver gilt, with cut stones set in filigree. Spanish. Seventeenth century.	
7. Gold beads, embossed and seeded. Greek Islands.	
8. Chain of flat-twisted gold wire and beads of lapis. Roman.	
9. Chain of gold, with pendant ornaments embossed and seeded. Sardinia.	
10. Chain of gold, with pendant ornaments, wire. Beads of lapis. Roman.	
11. Gold chain of looped wire. Anglo-Saxon - - -	22
CUP. Etruscan. Fifth century B.C. V. & A. M. (Compare 79) - - -	80
ENLARGED DETAIL of ornament in beads of gold soldered on. Etruscan. Fifth century B.C. V. & A. M. (Compare 80)	79
PENDANT. Pattern in gold wire soldered on. Wye Down, Kent. B.M. - - -	77
PENDANT. Pattern repoussé. Wye Down, Kent. B.M. -	78
See also	
FILIGREE - - - - -	222
INLAY - - - - -	184, 197
PIERCED BOWL - - - - -	196
GOUGING. See	
WOOD CARVING - - - - -	82, 83
GRANITE. Figure of Pasht carved in black granite. From Karnak. Egyptian. <i>ca.</i> 1400 B.C. B.M. - - -	
	94
GROTESQUE. See	
INLAY - - - - -	276
GUIPURE of gold and silver lace from St Mary's Church, Dantzig. Spanish. Seventeenth century - - -	
	278

HANDLE	FIGURE
OF JAPANESE FANS or hand screens. Modern - -	20
OF KETTLE. In bronze wire. Japanese - -	19
OF LACQUER MEASURE. In bamboo. Indian or Burmese -	18
See also	
IRON - - - - -	23
HUMAN FIGURES IN ORNAMENT. See	
WALL-PAPER - - - - -	274
WOVEN PATTERN - - - - -	271
IMPRESSED. See	
POTTERY - - - - -	122
TOOLING - - - - -	123
INCISED	
DETAIL OF CYPRESS WOOD COFFER. The ground once inlaid with coloured mastic. Italian. 1400-1420. V. & A. M. -	147
STONE. German. Late sixteenth century - -	275
See also	
LETTERING - - - - -	61
POTTERY - - - - -	63
INLAY. See	
COUNTERCHANGE - - - - -	53
INCISED - - - - -	147
IVORY - - - - -	247
LATTICE - - - - -	246
MOSAIC - - - - -	171, 118, 58, 117
PIERCED BOWL - - - - -	196
INLAY OF	
BRASS AND TORTOISESHELL. "Boulle" and "counter."	
French. Louis XIV. Designed by Berain - -	217
BRASS WIRE INTO BROWN WOOD. India, N.W. Provinces. V. & A. M. - - - - -	224
BAKED CLAY INTO WOOD. Egyptian. B.M. - -	191
CLAY INTO CLAY. Egyptian. B.M. - - - -	192
CLAY INTO CLAY. Egyptian. B.M. - - - -	193
CEMENT? IN MARBLE - - - - -	276
EBONY in golden brown wood with ivory pegs, forming part of a design from a Portuguese cabinet. Seventeenth century. V. & A. M. - - - - -	149
GARNETS into cloisons of gold. Anglo-Saxon. B.M. - -	184

INLAY OF

FIGURE

GARNETS in cloisons of gold (the eyes rounded) and filigree of twisted gold wire. Anglo-Saxon. B.M. (Larger than actual size) - - - - -	201
GLASS (coloured and foiled) in cloisons of gold on a bronze fibula. Merovingian - - - - -	200
GLASS MOSAIC IN CARVED MARBLE. From the Bishop's throne at Ravello. Byzantine - - - - -	255
HOLLY IN OAK. Detail and complete panel. From Sizergth Castle in Westmoreland. Latter part of sixteenth century. Now in V. & A. M. - - - - -	148
IVORY INTO BROWN WOOD. Engraved. Panel of a small casket. German. Sixteenth century. V. & A. M. - - - - -	150
IVORY AND EBONY on brown wood. Oriental - - - - -	55
IVORY INTO EBONY. Italian. V. & A. M. - - - - -	218
LAPIS, &C., INTO CARVED IVORY from North-West Palace of Nimrod. Egyptian. B.M. - - - - -	189
LAPIS AND OTHER PRECIOUS STONES into cloisons of gold. Part of armlet. Græco-Bactrian. B.M. - - - - -	197
MARBLE. From the pavement of the Cathedral at Siena - - - - -	3
MOTHER-OF-PEARL in lacquer. Indian - - - - -	8
MOTHER-OF-PEARL into gilt and lacquered gesso. S. George and the Dragon. By Fred Marriott. 1902 - - - - -	254
MARBLE (black and white). Details engraved and filled in with grey cement. From the pavement of the Cathedral at Siena. Fifteenth century - - - - -	152
MARBLE (red and grey into white). From the Cathedral at Florence. Italian. Fourteenth century - - - - -	151
MARBLE (white) into steatite. Saracenic - - - - -	50
MARBLES (white and tinted). From the pavement of the Cathedral at Siena. Beccafumi. Sixteenth century - - - - -	153
SERPENTINE (dark green) into white marble. From the floor of the baptistery at Florence. Thirteenth century - - - - -	221
SLIPS (coloured) into impressed tiles. Modern. L. F. D. - - - - -	194
VITREOUS PASTES or pottery into engraved ivory or bone. Egyptian. B.M. - - - - -	190
WOOD AND IVORY. Italian. Fifteenth century - - - - -	56
WOOD AND IVORY. Italian - - - - -	57
WOOD. Showing Arab influence. Italian. Sixteenth century - - - - -	60

INLAY PATTERN

IN BRASS WIRE. L. F. D. - - - - -	225
L. F. D. - - - - -	279

INTAGLIO carving in lacquered wood (black). Painted in dead colours and gold. From a folding screen. Chinese. V. & A. M. 256

IRON

CHISELLED HINGE. Nuremberg. <i>ca.</i> 1600	- - -	98
CHISELLED LOCK PLATES. French. Late fifteenth century	- - -	100
CHISELLED TERMINALS of a washstand. Italian. V. & A. M.	- - -	99
DETAILS OF TERMINALS. Leafage, &c., beaten into "swages."	- - -	
English. Thirteenth century	- - -	157
DETAIL OF WROUGHT HINGE. Plates of shaped and beaten sheet metal superposed for the flowers. German. Sixteenth or seventeenth century	- - -	161
DOOR KNOCKER with tracery background formed by two pierced plates, one laid over the other. French. Fifteenth century. Spitzer Collection	- - -	206
EMBOSSSED sunflower leaf. Designed by B. J. Talbert. Nineteenth century	- - -	6
GATE with fretted panels. From the chapel in the castle of the Counts of Flanders at Ghent. Flemish. Sixteenth century	- - -	203
GRILLE. Pierced. French Gothic. Fifteenth century. Bargello. Florence	- - -	280
GRILLE. Wrought. French. Thirteenth century	- - -	156
HANDLES or knockers. French. Sixteenth century	- - -	23
LOCK PLATE. Pierced, embossed, and engraved. German. <i>ca.</i> 1600	- - -	245
OR STEEL HORSE MUZZLE. Chiselled. German? 1567. Spitzer Collection	- - -	162
WROUGHT. Details chiselled, stems threaded. Augsburg. <i>ca.</i> 1600	- - -	159
WROUGHT. Details of sheet metal, stems threaded. Nuremberg. <i>ca.</i> 1600	- - -	160
WROUGHT GATES. Italian. Seventeenth century. V. & A. M.	- - -	158

IVORY.

CARVED and inlaid into lacquered wood. Modern Japanese	-	247
CASKET with brass mounting, carved with fleurs de lis. French. Late sixteenth century. Salting Collection	-	95
CASKET, carved. Spanish? Twelfth century. V. & A. M.	-	244
FIGURE of Tragic Actor. Greek. First or second century. Dutuit Collection	- - -	96

IVORY— <i>Continued.</i>							FIGURE
FIGURE of Virgin.	Gothic.	Fourteenth century.	Spitzer				
Collection	-	-	-	-	-	-	97
See also							
INLAY	-	-	-	-	-	150, 55, 218, 189, 190, 56, 57	
JOINERY.							
DESIGNED IN THE FORM OF A FRET.	Modern Japanese	-	209				
DOORS in Cardiff Castle.	By William Burges.	Nineteenth century	-	-	-	-	10
See also							
DOOR	-	-	-	-	-	-	251, 66
KNIFE WORK. See							
CHIP CARVING	-	-	-	-	-	-	81
WOOD CARVING	-	-	-	-	-	-	179
LACE.							
GREEK (so called), or "Reticella," or "Point Coupé."	Design by Federigo Vinciolo. Italian.	1587	-	-	-	-	120
NEEDLEPOINT. Linen foundation practically disappearing.	The culmination of drawn or cut-work.	Venetian.	Sixteenth century	-	-	-	43
NEEDLEPOINT or "Punto in Aria," with pearled "brides."	Trimmings of an altar frontal.	Venetian.	ca. 1660.	V. & A. M.			44
PILLOW WORK.	Buckinghamshire.	Nineteenth century	-				45
PILLOW, with fancy réseau and open work.	Buckinghamshire.	Early nineteenth century	-	-	-	-	74
ROSE POINT. The outline of cordonnet, the "brides" thorned.	Spanish or Venetian	-	-	-	-	-	48
SO-CALLED, not really réseau but a sort of embroidery on net, the mesh pulled out of shape by the stitching.	Limeric.	1885	-	-	-	-	46
See also							
CUT LINEN	-	-	-	-	-	-	75
GUIPURE	-	-	-	-	-	-	278
PILLOW LACE	-	-	-	-	-	-	215
LACQUER. See							
INLAY	-	-	-	-	-	-	8
INTAGLIO	-	-	-	-	-	-	256

	FIGURE
LATTICE of turned and inlaid wood. Arab	246
LATTICE WORK.	
With turned spindles. Old Arab	119
With turned spindles. Arab	127
LEATHER.	
BOOKBINDING, inlaid and tooled. French. Henri II.	166
BOOKBINDING, tooled, and the imprint of the tools used in producing the design. French. Louis XIII.	70
BOOKBINDING, tooled in gold. "Point coupé." French?	121
BOOKBINDING, tooled in gold. Poinctillé. By Le Gascon. French. Louis XIII. Seventeenth century	227
BOOKBINDING, tooled in gold, with engraved and pierced silver mounts. German. Seventeenth century	252
BOX-TOP. The centre onlay with leather of various colours, the pattern outlined with stitching in white. Embroidered border. Modern Indian. V. & A. M.	154
TARGE. Embossed and studded with brass rivets. Rob Roy's shield	230
See also	
CUT LEATHER	104
EMBOSSSED LEATHER	105
FRETED LEATHER	220
ONLAI D LEATHER	284, 285
LETTERING.	
BRUSH WRITING. Japanese	62
GREEK. Incised with a stylus. Roman cut into stone. Uncials, and Lombardic Capitals and other pen work	64
INCISED. Cuneiform inscription in stone. <i>ca.</i> 830 B.C.	61
LINEN. See	
WOVEN PATTERN	277
LINENFOLD.	
PANEL. Late Gothic	67
PANELLING. Late Gothic	69
PANELS. Late Gothic	240
Various examples. Late Gothic	68
LUSTRE. See	
POTTERY	124, 145, 173, 113, 253

MARBLE.

FIGURE

ARABESQUE from a sarcophagus by Benedetto da Rovezzano,
in the Church of SS. Apostoli. Florence. Sixteenth century 93

See also

INLAY	-	-	-	-	-	-	3, 152, 151, 153
MOSAIC	-	-	-	-	-	-	128, 4, 257, 117
PIERCED	-	-	-	-	-	-	202

MOSAIC.

DARK SERPENTINE and white marble. From the pavement
of the baptistery at Florence. Thirteenth century - - 54

GLASS. From the cloisters of S. John Lateran, Rome. From
a drawing by E. W. Nesfield - - - 171

GLASS. Pillars from the cloisters of S. John Lateran, Rome.
Drawn by W. E. Nesfield - - - 118

GLASS. The smaller detail *in* the glass itself. Roman?
B.M. - - - 58

GLAZED TILEWORK. Hispano - Moresque. Thirteenth or
fourteenth century - - - 49

MARBLE. Border of a pavement in black and white tesserae.
Naples Museum - - - 128

MARBLE. Details of Roman pavement now in the Campo
Santo at Pisa - - - 4

MARBLE. Figure of a priestess modelled in relief. One of
two panels. From Metaponto, now in the Museum at
Naples - - - 257

MARBLE. Opus Alexandrinum with central disc of porphyry.
From the Church of S. Marco, Rome - - - 117

See also

COUNTERCHANGE	-	-	-	-	-	-	53
INLAY	-	-	-	-	-	-	255

NIELLO. See

DESIGNS FOR DAMASCENING	-	-	-	-	-	181
SILVER DRINKING CUP	-	-	-	-	-	180

OAK cupboard with flat carving and wrought-iron hinges, lock
plates, &c. German Gothic. Fifteenth century. V. & A. M. 260

ONLaid LEATHER.

OUTLINED WITH GILT TOOLING. Bookbinding. French. Sixteenth century	-	-	-	-	-	284
---	---	---	---	---	---	-----

STITCHING FORMS OUTLINE. Top of an Indian box	-	-	-	-	-	285
---	---	---	---	---	---	-----

ONLAY.	FIGURE
OF GOLD CORD. Couching on velvet. Bookbinding. Henry	
VIII. B.M. - - - - -	226
OF SILVER upon bronze. Kurdish - - - - -	282
See also	
BRONZE - - - - -	164
OPUS ALEXANDRINUM. See	
INLAY - - - - -	117
OUTLINE.	
WHICH HARDENS FORM - - - - -	288
WHICH SOFTENS FORM - - - - -	289
See also	
EMBROIDERY - - - - -	270, 286
ONLAID LEATHER - - - - -	284, 285
STAINED GLASS - - - - -	283
WOVEN PATTERN - - - - -	287
PAINTED roof decoration. L. F. D. - - - - -	259
PATCHWORK of appliqué silk. By Mr and Mrs R. A. Dawson	155
PIERCED.	
AND CARVED MARBLE panel from the Church of Santa Maria dei Miracoli, Venice. By Tullio Lombardo - - -	202
BALCONY DECORATION. The planks sawn into shape before being put together. Traditional Swiss - - -	207
BOWL OF GOLD. Originally enclosing precious stones. Byzantine Gothic. Found at Petrossa, a village in Roumania. Probably by Dacian workman, <i>ca.</i> fifth century - -	196
LATTICES. The planks notched before being put together. Old Arab - - - - -	208
SPIRAL ORNAMENT. Javanese. B.M. - - - - -	129
See also	
IRON GATE - - - - -	203
SILVER GILT - - - - -	262
STAINED GLASS - - - - -	195
PILLOW LACE in imitation of Venetian point, the "brides" knotted. Milan, Italy. Seventeenth century. V. & A. M. -	215
PLASTER.	
ENRICHMENT. Arab. V. & A. M. - - - - -	165
INCISED or stamped. Arab - - - - -	176

PLASTER—*Continued.*

FIGURE

STAMPED in high relief. From the Synagogue at Toledo.	
Moorish - - - - -	177
See also	
STAINED GLASS - - - - -	195

POINCTILLÉ.

PATTERN. L. F. D. - - - - -	228
See also	
LEATHER BOOKBINDING - - - - -	227

POTTERY.

BASE of a white salt-glazed stoneware candlestick with incised and stamped ornament. Siegburg, Germany - -	63
DETAIL from a cylindrical white salt-glazed stoneware jar, scratched pattern. Meckenheim, Germany - -	174
DETAIL of earthenware dish. Sgraffitto. Buff glaze streaked with green and yellow. Italian. Late fifteenth century. V. & A. M. - - - - -	175
DETAIL of raised yellow slip on a dark brown ground. Glazed. Persian. V. & A. M. - - - - -	137
DETAIL of salt-glazed stoneware. The ornamental details in relief. Slip applied to the body and stamped with a die—the stems dug in. Cobalt blue and manganese purple on greyish body. Dutch. 1691. V. & A. M. - - -	238
DETAIL of sunk ornament on salt-glazed stoneware. The leaves impressed with a stamp, the stems dug in with a tool. Ground cobalt. Limburg. V. & A. M. - -	237
DETAIL of white slip on a less pure white ground. Glazed. From a Turkish mug. Sixteenth century. V. & A. M. -	138
DETAILS of Rhodian and Persian ornament. Free brushwork in blue and white faience. V. & A. M. - - -	7
EARTHENWARE DISH. Painted in blue and manganese on white. Rhodian. <i>ca.</i> 1500. V. & A. M. - - -	144
EARTHENWARE JAR. Reddish, unglazed, with ornamentation in slip, in which are embedded jewels of blue glass or vitreous paste. Roman - - - - -	14
EARTHENWARE VESSEL with patternwork - - - - -	130
EARTHENWARE WITH EMBOSsing pushed out with the fingers in the moist state of the clay. Glazed and lusted. Gubbio, Italy. End of fifteenth century. V. & A. M. - -	124

POTTERY—*Continued.*

FIGURE

GLAZED EARTHENWARE dish painted in blue and silver lustre. Hispano-Moresque. Valencia. Fifteenth century. Spitzer Collection - - - - -	145
GLAZED EARTHENWARE, painted and lustred, with slip ornament in relief. Fine diaper picked out. Persian. V. & A. M. - - - - -	173
GLAZED EARTHENWARE. Persian. V. & A. M. - - - - -	136
PAINTED EARTHENWARE. Persian. V. & A. M. - - - - -	268
PAINTING. Blue and white. Earthenware. Persian - - - - -	39
PAINTING in brown on greyish white. Stoneware. From Satsuma, Japan - - - - -	38
PÂTE-SUR-PÂTE decoration. By M. L. Solon. Nineteenth century - - - - -	143
PATTERN stamped with bookbinders' tools in white earthenware, and filled in with coloured clay. French. Henri II. - - - - -	122
PLAQUE OF EARTHENWARE. Inscription in raised slip, coloured, on a ground of lustre, with pattern in white. The fine diaper picked out. Persian. Spitzer Collection - - - - -	113
PORCELAIN vases with coloured glaze. Chinese. V. & A. M. - - - - -	132
RED UNGLAZED EARTHENWARE with whitish slip decoration in high relief. Roman. B.M. - - - - -	139
SALT-GLAZE STONEWARE. Beer jugs. Old German - - - - -	131
SALT-GLAZE STONEWARE. Dutch. 1691. V. & A. M. - - - - -	239
STOVE SLAB of earthenware glazed with copper green. German. Sixteenth or seventeenth century. V. & A. M. - - - - -	112
TILE—star-shaped earthenware—just sufficiently modelled in slip to give value to the metallic lustre on it. The forms defined by painted outlines, &c. Persian. Sixteenth century - - - - -	253
TILES of clay shrunk in the drying so as to show "crackle" - - - - -	135
TILES. Modelled and glazed. L. F. D. - - - - -	52
TILES with raised outlines to form cells for coloured glazes. Made at Seville. Sixteenth century - - - - -	2
TILES with raised outlines to form cells for the coloured glazes. L. F. D. - - - - -	51
UNGLAZED BLACK EARTHENWARE with refined slip decoration in creamy white. Found in Britain. Roman. B.M. - - - - -	140
See also	
CARVED SANDSTONE - - - - -	178
MOSAIC - - - - -	49

	FIGURE
PRINTED COTTON. L. F. D. - - - - -	37
PATTERN DISCHARGED. L. F. D. - - - - -	40
TWO PRINTS. Outline of flowers left clear between two prints.	
L. F. D. - - - - -	41
PRINTED VELVET. L. F. D. - - - - -	36
REPOUSSÉ. See	
SILVER - - - - -	III, 16
SILVER GILT - - - - -	13
SGRAFFITTO. See	
POTTERY - - - - -	174, 175
SILVER.	
BOWL. Embossed and chased. Parcel gilt. Russian. Seventeenth century - - - - -	109
CROZIER. French. François I. - - - - -	111
CUP. From a design by Hans Holbein. German. Sixteenth century - - - - -	16
CUP - - - - -	267
DISH. English. Charles I. London. 1653 - - - - -	108
DRINKING CUP with decoration of strapwork and quasi-Arab ornament in niello. German. Sixteenth century - - - - -	180
EMBOSSSED or punched detail from a tankard. Viennese. 1731 - - - - -	107
RIM OF A DISH. Embossed and chased. Venetian. ca. 1500 - - - - -	110
TANKARDS. English of the end of the sixteenth and beginning of the seventeenth centuries - - - - -	134
TANKARDS of simple shape. English. The shorter 1692, the taller 1640 - - - - -	12
See also	
DESIGNS FOR DAMASCENING - - - - -	181
LEATHER BOOKBINDING - - - - -	252
ONLAY - - - - -	282
SILVER GILT.	
EWER. German. Sixteenth century - - - - -	13
FILIGREE enclosing precious stones. Part of a book cover.	
Byzantine. Collection of Sir D. T. Gibson-Carmichael, Bart.	199

SILVER GILT—*Continued.*

FIGURE

MOUNTING to morocco bookcover. Pierced and chased.	
Dutch. 1670. V. & A. M. - - - - -	262
RELIQUARY. French? Gothic. Fifteenth century. Spitzer Collection - - - - -	21

SLIP. See

POTTERY - - - - -	137, 238, 138, 14, 173, 143, 122, 113, 139, 140
-------------------	---

STAINED GLASS.

DETAIL showing—A. Glazing. B. Painting. C. Painting and glazing together - - - - -	248
FRAMED IN PIERCED PLASTER. From Cairo. V. & A. M. -	195
GRISAILLE PATTERN. French. Thirteenth century - -	283
TESSERÆ of different colours fused on to a sheet of clear glass. French. 1900. Daumont Tournel - - - - -	249
TWO LIGHTS with figures of a bishop and S. Elizabeth of Hungary under canopies. German. Fifteenth century Gothic. Spitzer Collection - - - - -	258

STAMPED. See

LEATHER BOOKBINDING - - - - -	166, 70, 121, 252, 227
POTTERY - - - - -	122, 237
TOOLING - - - - -	123

STEEL. See

Designs for damascening - - - - -	281
-----------------------------------	-----

STENCIL DESIGN. See

Diagram - - - - -	214
-------------------	-----

STENCIL PLATES. Japanese - - - - -	210
------------------------------------	-----

STENCILLED

LEAF FORMS with ties made use of to render veining, &c.	
Japanese - - - - -	5
PATTERN. Flights of wild ducks across the sky. Japanese -	213
PATTERN. By George F. Wood - - - - -	216
PATTERN. Iris. Japanese - - - - -	211
PATTERNS. Cherry blossom. Japanese - - - - -	212

STONE CARVING.							FIGURE
GOTHIC. Laon, France. Thirteenth century -							92
ROMANESQUE from Le Puy. French. Thirteenth century -							91
SPANDRIL from Wells. Thirteenth century -							89
STONEWARE. See							
POTTERY	-	-	-	-	-	-	63, 238, 237, 131, 239
STRAPWORK. See							
BYZANTINE ORNAMENT	-	-	-	-	-	-	172
DESIGNS FOR DAMASCENING	-	-	-	-	-	-	281
LEATHER BOOKBINDING	-	-	-	-	-	-	166
PLASTER	-	-	-	-	-	-	165
SILVER	-	-	-	-	-	-	180, 107
WOOD CARVING	-	-	-	-	-	-	146, 163, 167, 170, 168, 169
TILES. See							
INLAY	-	-	-	-	-	-	194
POTTERY	-	-	-	-	-	-	253, 135, 52, 2, 51
TISSUE. See							
WOVEN PATTERN	-	-	-	-	-	-	33, 30, 31
TOOLING. The pattern impressed in blind. Italian. Sixteenth century -							
See also							
LEATHER BOOKBINDING	-	-	-	-	-	-	166, 70, 121, 252, 227
TRANSLUCENT INLAY. See							
PIERCED BOWL	-	-	-	-	-	-	196
TURNING. See							
LATTICE	-	-	-	-	-	-	246, 119, 127
VELVET. See							
WOVEN PATTERN	-	-	-	-	-	-	35, 73, 287
WALL-PAPER							
FOR A NURSERY. "The House that Jack built." Designed by Walter Crane for Jeffrey & Co. -							274
See also							
EMBOSSSED	-	-	-	-	-	-	42

WOOD. See

	FIGURE
DOOR - - - - -	251, 66
FRETTED - - - - -	205, 204
INLAY OF - - - - -	149, 148, 150, 55, 56, 57, 60
LINENFOLD - - - - -	67, 69, 240, 68
PIERCED - - - - -	207, 208

WOOD CARVING.

ARABESQUE in walnut from the stalls of S. Severino, Naples.	
Italian. Sixteenth century - - - - -	86
BOX of pine with flat strap ornament. Knife work. Icelandic.	
V. & A. M. - - - - -	179
COFFER (part of) in walnut. French. V. & A. M. - - -	87
DOOR OF A CUPBOARD. Late Gothic. German - - -	261
DOOR PANEL with strapwork in low relief. French. Sixteenth century. Edinburgh Museum - - - - -	146
DOUBLE DOORS. Arab. Twelfth century - - - - -	163
END of a long shutter panel with raised centre. French Regency - - - - -	243
FLAT STRAPWORK ornament from the base of a walnut wood coffer of which the upper parts show Gothic influence.	
North of France. Sixteenth century. V. & A. M. - - -	167
GOUGE WORK. From an oak coffer. French. 1550 to 1600.	
V. & A. M. - - - - -	82
GOUGE WORK. Salt bowl. Old Italian. V. & A. M. - - -	23
GROTESQUE from a cassone at Pistoja. Italian - - -	85
HERALDIC. Cupboard door. Oak. German. Late Gothic -	88
MODERN INDIAN. V. & A. M. - - - - -	84
OAK PANEL (detail of) sunk in a longer panel. French.	
François I. V. & A. M. - - - - -	241
SHOWING the relation of 241 to the long panel. French.	
François I. V. & A. M. - - - - -	242
OAK PANEL with strapwork and vine. English. Sixteenth century. V. & A. M. - - - - -	170
SOMERSETSHIRE. Fifteenth century - - - - -	90
WALNUT WOOD door panel with flat strapwork ornament foliated. French. Sixteenth century. From a cast in the	
V. & A. M. - - - - -	168
WALNUT WOOD door panel with flat strapwork ornament.	
Lyons. Second half of sixteenth century. V. & A. M. -	169

WOOD CARVING—*Continued.*

FIGURE

See also

CHIP CARVING	-	-	-	-	-	-	81
INCISED	-	-	-	-	-	-	147
OAK CUPBOARD	-	-	-	-	-	-	261

WOVEN PATTERN.

BROCADE with diagonal "binding." Green satin warp (ground), white figure (weft), brocaded with gold. Italian. Seventeenth century	-	-	-	-	-	29
BROCADE. Green satin ground brocaded with colours, white and gold	-	-	-	-	-	76
BROCADE. Yellow tabby ground, white ornamental figure. Colours of flowers brocaded	-	-	-	-	-	34
BROCATELLE with design in yellow on a red ground, all crossed with gold. Part of a stole. The assumption and coronation of the Virgin. Italian. Fifteenth or sixteenth century. Cluny Museum, Paris	-	-	-	-	-	271
CARPET. Portion of border. Old Persian. V. & A. M.	-	-	-	-	-	26
DAMASK. Fifteenth century	-	-	-	-	-	72
DAMASK. Green and yellow on violet silk with silver thread running through. Spanish. Sixteenth century. Spitzer Collection	-	-	-	-	-	272
FIGURED TABBY. Two warps, one shuttle. White ground, red figure. Eighteenth century	-	-	-	-	-	32
GERMAN. Fifteenth century	-	-	-	-	-	71
LINEN DAMASK. Part of a tablecloth border designed by Walter Crane	-	-	-	-	-	273
LINEN DAMASK. Seventeenth or eighteenth centuries. Dresden Museum	-	-	-	-	-	277
SATIN TISSUE. Ground purple (warp), leaves green, flowers white, and cream colour, changing shuttles. Eighteenth century	-	-	-	-	-	33
TISSUE. Crimson satin ground (warp). Crimson and white figure (weft). Italian. Eighteenth century	-	-	-	-	-	30
TISSUE. Red satin ground standing up above vellum coloured figure (Tabby). Silver tissue. Seventeenth century	-	-	-	-	-	31
VELVET (crimson) with two piles. Italian. Fifteenth century. V. & A. M.	-	-	-	-	-	35
VELVET (crimson). Italian. 1450 to 1500. V. & A. M.	-	-	-	-	-	73
VELVET. Details showing the use of "terry" as an outline, &c., as intermediate texture between satin ground and soft pile	-	-	-	-	-	287

I. INTRODUCTORY.

Ornament inseparable from the thing ornamented—Must be adapted, therefore, to conditions—Historic style the result of workmanlike acknowledgment of this—Necessity, therefore, of studying ancient ways of work—Modern workman must concern himself about other methods than those of his own workshop—Knowledge imperative—Not hurtful to originality but helpful to it.

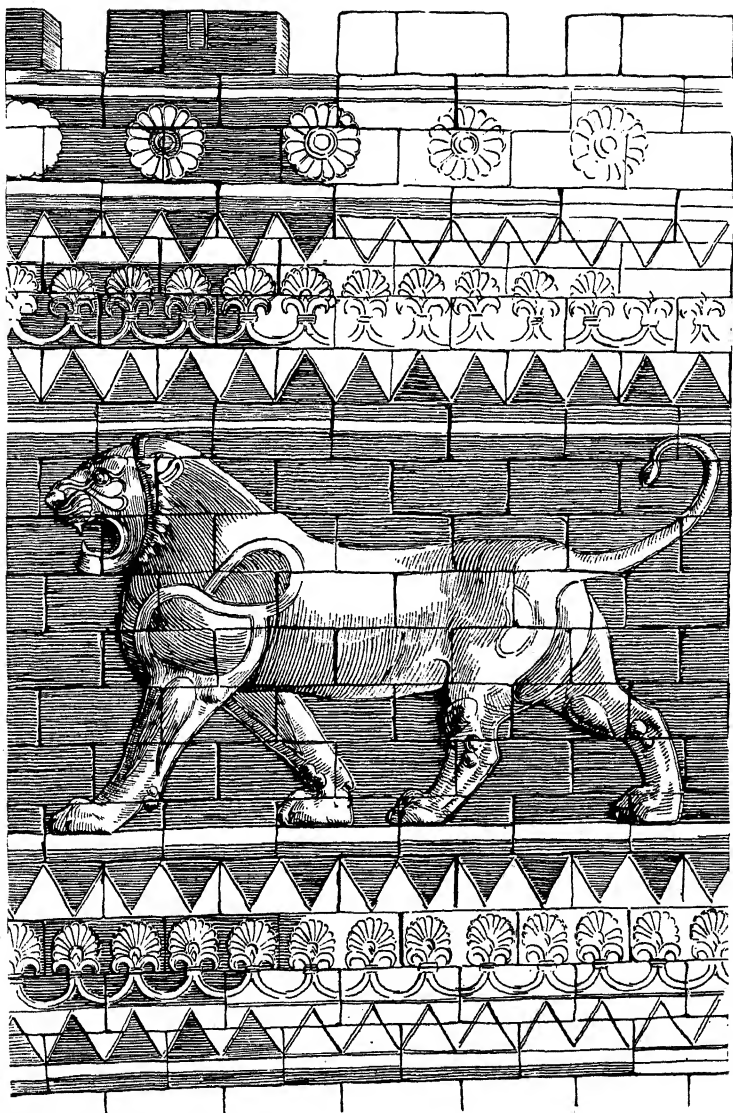
ORNAMENT and its application, says the title of this book ; but apart from its application there is no such thing as ornament. It is ornament relatively only to its place and purpose. In theory we may discuss it independently of them, in practice ornament is inseparable from the thing ornamented.

The absolute necessity, therefore, of adapting its design to inevitable conditions is obvious. The equal need of conforming to the more technical conditions imposed upon the workman by his materials and tools and the various ways of working, is not so generally appreciated—and naturally : it takes a workman thoroughly to appreciate that.

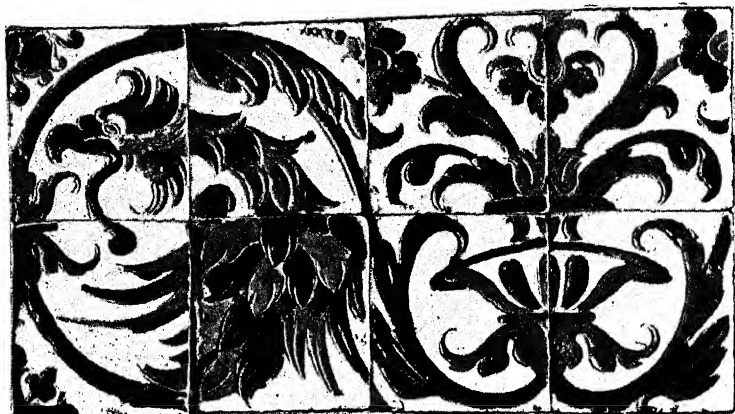
Working artists, no matter what their particular work, are aware of the strict subservience of their art to conditions inherent in it. A man may think that workers in some other medium are not so tightly bound ; he may resent the conditions under which he works ; he is wiser if he bows to them. For the truth is, and the closer we inquire into the matter the clearer it becomes, that they are common to all practical design. The art we most esteem is that of men who cheerfully accepted them. The style we

recognise as "historic" grew out of obedience to them. It is for that reason, and for the light it throws upon technique and its very close connection with design, that some serious inquiry into the evolution of design is a necessary preparation to invention of our own.

There is a point of view from which the consideration of primitive and very likely obsolete ways of working may appear to the progressive mind worse than useless. The student of to-day, it is sometimes said, knows already more than enough of the art of other days and other nations; to inquire too curiously into the past is to confuse his mind; he should work by rights in the spirit of his own times. There would be more force in that contention if there were any question of disturbing the simple-minded and whole-hearted devotion of modern workers to a modest ideal of craftsmanship such as we may imagine to have been natural to workmen of the Middle Ages. There is no longer any fear of that: we have long since outgrown content with tradition. Whatever advantage it may have been to the old-world artist that the range of his experience was so limited—it certainly set natural and proper bounds to his ambition, bounds which we are not disposed willingly to accept—for good or ill, we have quite given up old precedent for new experience. And, though it were the substance that we have dropped for the shadow, the moment is passed when it is possible to recover what the stream of events has carried out of reach. We have outgrown the naïveté of innocence. The greater our need of knowing. Now that we have no longer trustworthy traditions to go by, we want all the enlightenment tradition can give us, if only that we may choose our own way. In fact, we live in days when it is as necessary that a workman should be acquainted with all manner of methods, as it was once natural for him to be ignorant of all but what was going on about him in the workshop.



I. ANCIENT ASSYRIAN WALL DECORATION IN ENAMELLED BRICK.



2. OLD SPANISH TILE DECORATION IN COLOURED GLAZES.

To refer merely to the glazed earthenware of the past. There was most admirable and essentially modern work in *grès* at the last Paris Exhibition, which would never have been done but for the remarkable enamelled brickwork from Susa, now in the Louvre (1); and some of the most effective of modern tiles have been designed on the hint given by the old Spanish work in coloured glaze (2).

It is a mistake, no doubt, to cram the artist with information he cannot properly digest, to load the workman with learning to an extent that would hinder the free play of his faculty. But, if art is to take its place in the world, artist and workman must be up to the level of contemporary enlightenment—they cannot afford not to know what is within general knowledge. And the choice is not between ignorance and cramming. There is the alternative of moderate indulgence. After a surfeit of good things we instinctively starve awhile. At the worst, however, the case is not desperate; nature comes to our relief; a moment's sickness and the evil is past, a healthy appetite asserts itself once more, knowledge is once again easily digested, ex-

perience assimilated ; and, refreshed and strengthened, the artist is more an artist than before.

It is strange that there should be any occasion to insist at this date upon the necessity of knowledge, and to combat the common superstition that the artistic faculty, because it is inborn, is all-sufficient. As if the faculty of learning from what went before, the distinctively human faculty, were not inborn ! Whatever our native genius, it needs sustenance. Knowledge can but strengthen an artist in the exercise of his power. As for the theory that it weighs upon originality, we forget how rare a thing originality is—and was, even in the days when knowledge, too, was rare. If ever individuality was extinguished by the breath of education, it must have been at best a feeble flame, hardly worth nursing, certainly not worth keeping alive by screening off all knowledge : it could never have been kindled to much purpose, or it would not have been so soon snuffed out.

An artist is an artist very much because, however well informed, he is himself, and depends in the end upon his own initiative. For all that, sure sign of weakness though it be to rely upon the experience of others, inborn instinct is not all the guide he needs. There are times when he must follow that though all the world said no—but only after weighing what they had to say—and to do that he must not be entirely unequipped with what is common knowledge. He owes that much to his art.

II. CONVENTIONAL TREATMENT.

The necessity of conventional treatment—The meaning of the word—Conventions proper to one craft not the conventions of another—Examples—Conventional as compared with natural—Ornament implies modification of natural form—Conventional treatment in the interests of reticence and self-restraint.

NO artist will be found to deny the claims of "treatment" in design: many will protest it ought not to be conventional. I maintain it should.

It seems almost as if the terms employed to throw light upon the subject of art had been devised for the express purpose of making darkness darker. More especially is that so in the case of words which have a general as well as a technical meaning, and are used now in one sense now in the other, or it would be more exact to say another, for the choice of interpretation is not limited to two alternatives.

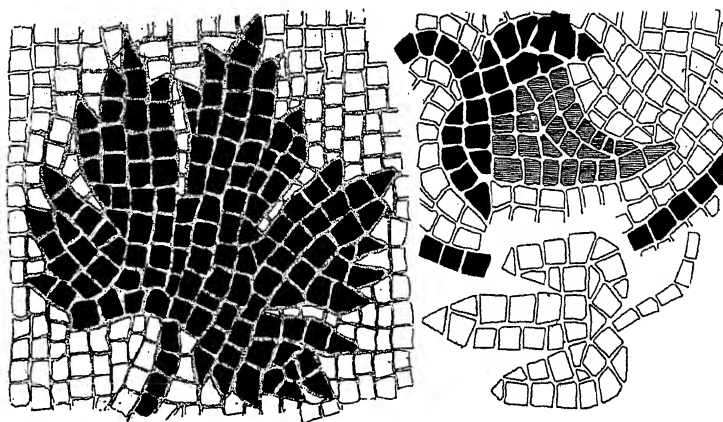
Lame and misleading, however, as the terms may be, without them discussion would progress at a pace so slow that nothing short of "parliamentary" would describe it. The language of all specialists is a sort of jargon, but it helps along discussion. It is the current coin of technical traffic. But we must first know its value; and in the case of words coined, shall we say, in Bohemia, that is not always precisely determined. We may, and must indeed, begin by defining the terms to be used. That is easily said; but the difficulty is not so easily overcome. No sooner do we set out to define than we fall into the use

of words themselves in need of definition. And, then, it is not in art as in science where a precise line can always be drawn. The artist has the defects of his qualities, and, by his very temperament, he is disposed neither to accept a hard and fast definition nor to be precise in expressing his meaning. A perfect web of confusion has been woven about the subject of ornament by the criss-cross and hap-hazard use of the word "conventional." We must needs interpret it according to the speaker, to whose mind we have not always the key. Where one person means by conventional treatment just such rendering of natural form as may be consistent with the character of the work in hand, another uses the word to express a treatment which is no better than a foregone conclusion.

The respect and the contempt in which convention is held are alike intelligible when we understand that it stands in the speaker's mind, in the one case for the treatment of ornament after its kind, intelligently, reticently, and with the restraint which fits it for its



3. MARBLE INLAY, SIENA.



4. DETAILS OF ANCIENT FLOOR MOSAIC.

place and purpose; in the other for all that is outworn and lifeless. In the latter sense it is a term of reproach—and deservedly so. And there are grounds for the use of it in that way. A convention is literally something which has come to be accepted; and as a general rule we do not accept an idea until it is already stale, nor settle down into a way of doing until it is already overdone. It is but natural, therefore, to identify acceptance with dullness. And well we may, if convention is taken to imply certain stereotyped forms of ornament. Then indeed there is an end to the flow of invention: the word stands for stagnation.

But in the stricter and truer sense it is not the forms of ancient days which are to be accepted as models, but only a certain principle to be deduced from the best work of the best artists in the best periods all the world over—the principle of what artists in general call “treatment.” And certain lines of treatment have been agreed upon, by those capable of forming an opinion upon design, as best suited to certain purposes, and in particular to certain



5. DETAILS OF JAPANESE STENCILLING.

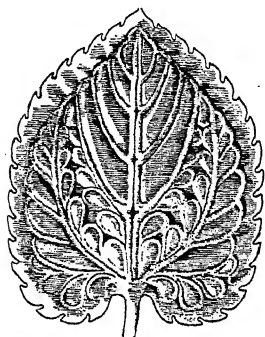
materials, to certain tools employed or processes used in working them; and so we have "conventions" not merely worthy of the respect of the workman but without which he is unequipped for his work.

The convention of one craft is often as remote from that of another as from nature itself. The mosaicist designs a leaf or bud adapted to be built up of three-or-four-sided rough chips of marble (4). The stenciller (5) turns the veins of his leaves into convenient "ties." The ironworker, too (6), makes ornament out of veining, but beats up the interspaces into ornamental bosses. The Persian potter (like the old Greek before him) invents for himself a kind of leafage which he can render fluently with the brush (7), and the Indian lacquer-worker (8) leaflets which will give him as little labour as possible in filing his mother-o'-pearl into shape.

It was perhaps an evil hour in which the word "convention" was chosen to express such treatment; it has led admittedly to much misunderstanding; but since we find it in use, it is as well not to be frightened by any odium that may cling to it, but to accept it, and try if we cannot turn a badge of undeserved reproach into an honourable

distinction. As well fight under one banner as another, so long as it is for the cause we have at heart.

For my part I see nothing for it but to accept the term "conventional" to express the kind of treatment adapted both to the use and purpose of ornament and to the material, tools, and methods of work employed upon it—not by any means necessarily the treatment heretofore employed, though it will hardly be quite independent of it. Advance in art is a process not of uprooting but of growth, often very gradual, seldom sudden.



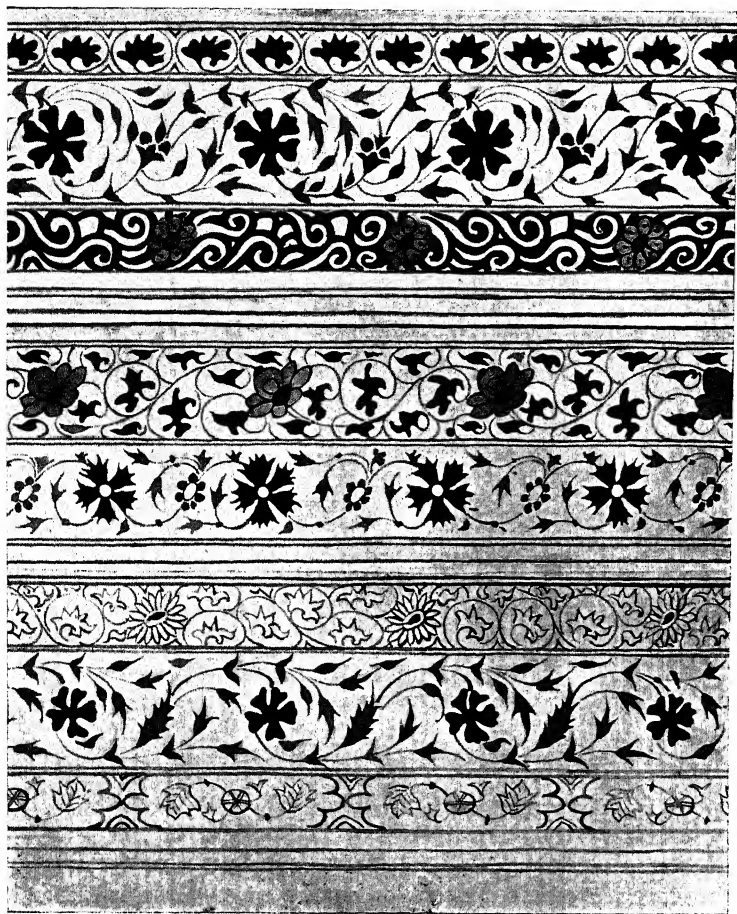
6. DETAIL OF EMBOSSED
IRON, NINETEENTH CEN-
TURY ENGLISH.

We talk of the "principles" of old work. They are at best elusive. Those who have attempted to grasp them have sometimes seized only upon the forms in which they happened to be embodied, forms expressive, it may be, to the seeing eye, but still only forms, which, even if not outworn, are probably in some degree unsuited to express a modern idea. We are, after all, moderns.

It is especially unfortunate that the examples referred to as illustrating the principle of conventionality, are commonly of a character so dry and rigid as to give colour to the notion that "convention" is a thing altogether without elasticity, another word in fact for "formula."

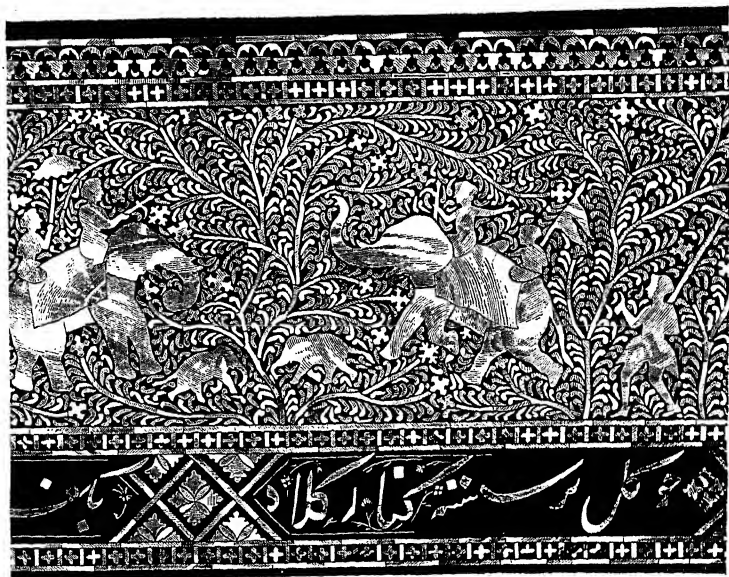
There is no great difference of opinion among artists as to the value of "treatment" in design; where they really differ is in their interpretation of the word "conventional." It is according to their interpretation of it that they esteem or despise it. By their estimate of it you may tell what it is they understand by the word.

If by conventional ornament we are to understand



7. DETAIL OF PERSIAN POTTERY PAINTING ADAPTED TO FREE BRUSHWORK.

perpetual variation on the old, old tunes long since played out, if we take it to mean slavish adherence to well-worn types, if we identify it with the affectation of a manner not our own, if we argue from it a bigoted adherence



8. DETAIL ADAPTED TO INLAY OF MOTHER-O'-PEARL—INDIAN.

to the letter of an antiquated and obsolete law—no one with a spark of originality or invention in him (no artist, that is to say) can consistently belong to the party of convention.

If, on the other hand, we understand the term to imply just that judicious treatment of natural form inspired by the sense of fitness, and illustrated from time immemorial in the practice of all masters of ornament, then it is difficult to understand how any cultivated or thoughtful person can admit the idea of ornament other than conventional.

Natural and conventional represent, in common parlance, methods as wide apart as the poles. Yet all artists are the children and the servants of Nature, looking to her as the one source of inspiration. Those do not serve her best who most slavishly, or faithfully—in any case thought-

lessly—copy the natural forms nearest at hand. There is no reason to conclude that natural forms, perfected for a natural purpose, are necessarily and without more ado adapted to the very different purposes of art. We are only following faithfully in the footsteps of Nature when we modify them as our purpose may require.

The very conception of ornament implies modification of the natural forms on which it may have been founded. There is little in nature which is ready made to the hand of the artist. A masterpiece of art is what it is in virtue of a something which was not in the natural *motif* of the artist, but in his treatment of it. A better word might very likely be found for this apt treatment of ornament, if it were worth while to go out of our way in search of it; but, call it what you will—conventional, ideal, individual—there is in all applied art (in all art for that matter, but it is here only the question of ornament) a something, non-natural it may be (in the sense that it is not borrowed from natural forms), but by no means contrary to nature, and least of all to human nature. Instinctively men shape things to their needs.

Conventionality in ornament is the natural consequence of reticence or self-restraint, of doing, not all that the artist could have done, but just what is called for by the occasion. And, apart from that reserve which is the surest characteristic of artistic strength, restraint is continually imposed upon the designer of ornament by the natural conditions of his work, by the consideration of its place and purpose, by the means employed in doing it, and very especially in view of that repetition which becomes in these days more and more a necessity of its very being.

III. APPLIED ART.

The term "applied" used in reference not to ornament but to the art in it—Ornament properly no after-thought, inherent in the design of the thing ornamented, a consideration from the very beginning of the design—Examples—The test of well-applied ornament, that it does not seem to be added—Applied art always practical art, the solution of a problem—The logic of design.

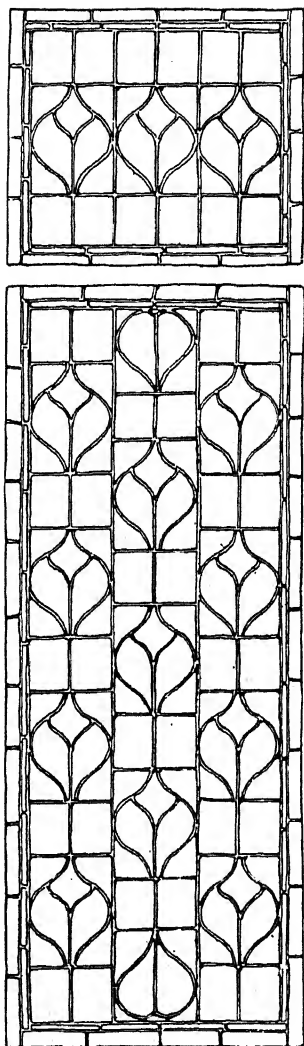
THE proverbial distinction between use and ornament points to a mistaken but very prevalent idea that ornament is a sort of after-thought—a something added to a thing after it is made. A county councillor, for example, is quite capable of supposing that an engineer has only to plan a convenient and substantial bridge, and it is for the artist afterwards to make it beautiful with architectural trimmings.

Absurd as this misunderstanding is, it is quite a common one even with persons of intelligence, who are misled, perhaps, by the use of the word "applied" design. It is, however, by no means in the sense of added or superfluous ornament that artists use the term. It is not to the ornament but to the art that they refer as being applied or adapted to some decorative purpose—surely a perfectly natural and clearly comprehensible use of the word.

All art, it has been said, is in some sense applied. That may be so. Still, practically speaking, there *is* a difference between the art, let us say, of the modern painter or illustrator and the art of the decorator—still more of the designer of things manufactured. To pretend otherwise is to create a confusion in which discussion of the subject becomes hopeless.

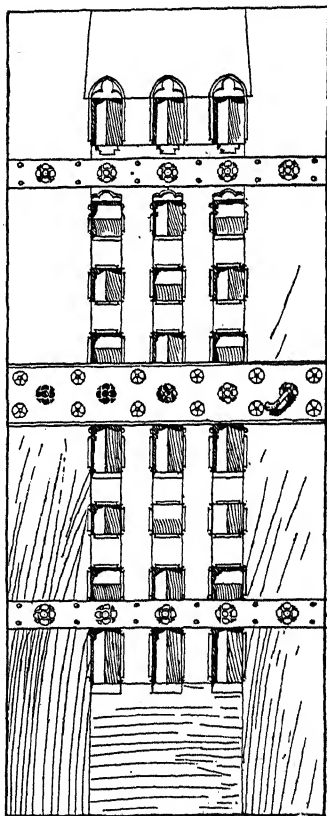
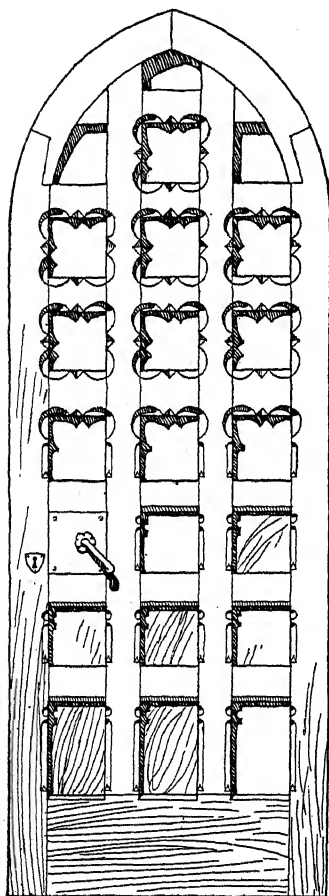
Some other term might possibly be found: "concerted," for example, would quite express the kind of art—art working, that is to say, in concert with some craft or useful purpose—and would definitely dissociate it from the art which has only to play its own fiddle. But fantastic terms are better avoided; and "applied" art does well enough to distinguish the art of the modest member of a band from that of the soloist: it is in use, and we may as well accept it. On no account, however, must it be taken to imply that ornament is separable from its use. It is not ornament until it is applied. The purpose to which it is to be put determines it from the very beginning. It is neither an after-thought nor an added something, but inherent in the design of the thing to which we say it is "applied"; it is not so much extra to it as a modification of it in the interests of beauty.

The designer is influenced in the very choice of his material by its colour and texture, by the ease with which it can be cut, beaten, or otherwise worked into the shape which is at once practi-

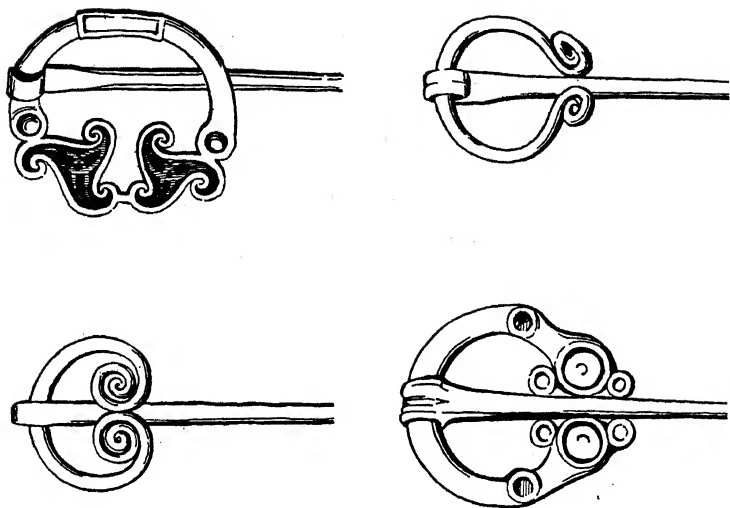


9. DESIGN APPLIED TO
LEAD GLAZING.

cally useful and artistically sufficing. In so far as his plan is affected by considerations not purely utilitarian, he is engaged from the beginning in ornamental design; and in so far as such design is schemed with a view to its practical purpose, it is in the strictest sense applied. To shape a thing beautifully is no less "applied" design than to ornament it



10. DESIGN APPLIED TO JOINERY—WILLIAM BURGESS.



II. IRISH BROOCHES OF USEFUL FORM.

after it is made. The glazier who proposes to build up his window with small pieces of glass, as in old days he was obliged to do, and as it is still often expedient that he should (9), applies his art to leading them together at once securely and in satisfactory lines, and the result is a pattern. The joiner (or it may be, as in the case here illustrated—10—the architect) who is not content simply to frame his door together strongly, but is careful as to the proportion of its panels, is engaged in applied design before ever he bethinks him of ornamental chamfering. And in softening off the sharp edges of his stiles in that way, he is at once forestalling injury to them, and further applying his artistic powers to practical purpose, which he does again when he proceeds to make ornamental use of the broad bands of iron by which the wooden framework is in one instance strengthened.

Forms which we find ornamental were in some cases at least suggested by use. The Irish brooch (11) or the Roman



12. OLD ENGLISH TANKARDS OF SERVICEABLE SHAPE.

fibula is in its simplest form just a safety pin. It was in the first instance designed to fasten and hold tight. When, however, the goldsmith or the bronze worker began to take thought of beauty and to modify its lines, however slightly, with a view to shapeliness, he ventured on what we call applied design, though he may not have added a feature to it which had not its origin in use.

It is use again which determines the shape of a drinking or other domestic vessel, which fixes its dimensions and capacity and suggests its general shape, which settles that its mouth shall be open or that its neck shall be narrow, that its spout shall be so devised as to pour out only at the right moment, that its foot shall be firm, its handle fitted to the hand and placed with due regard to equilibrium. The reconciling of purely utilitarian considerations such as these with considerations of proportion, grace, in short the look of the thing, is already the function of applied art before any thought occurs of what is generally understood by decoration. And art is by no means to be measured by the ornamental character

of the design. There is more art in the severely simple silver tankards on page 18 (English manufacture of a not very flourishing period of art) than in the over-elaborately ornamented piece of German silversmith's work (13) of an earlier and better period. And of the two English tankards the more severely plain is the more artistic.

The application of art is shown again in the simple shape of the little Roman jar, overleaf, to be recognised at once as clay, whereas the excrescences upon it, applied in the sense that they are stuck on to it (the process of execution is described on page 197), are an ingenious aberration from art.

The reconciliation of the shape demanded by use with that proper to material—glass (15), earthenware (14), metal (16 and 17), or whatever it may be, and further to the kind of glass, blown or cut, the kind of clay, stiff porcelain or plastic earthenware, the kind of metal, beaten silver or cast bronze (see "Where to Stop," page 157 *et seq.*)—is again the function of applied design.

No better instance of applied design could be given than the shapely treatment of any feature, such as handle, spout, hinge, bolt, or lock, which may be necessary to use, and its judicious introduction.

The test of artistic application is that it should not appear

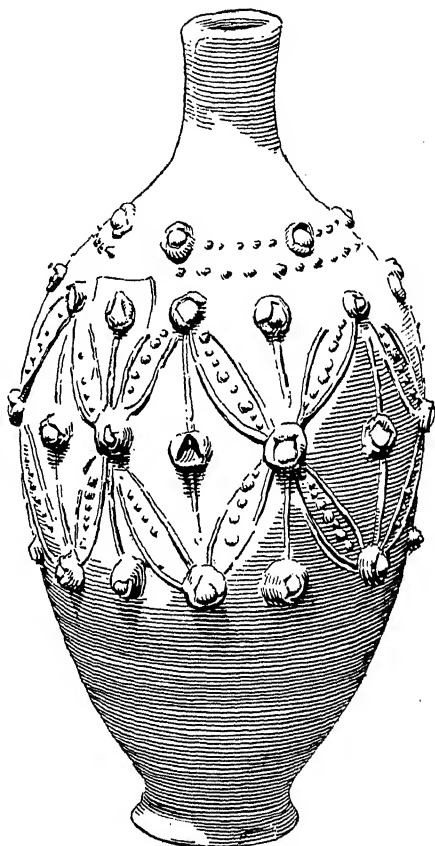


13. OVER-ELABORATED SIXTEENTH CENTURY EWER.

to be added. There should be no suspicion of its having been an after-thought. It belongs by rights to the design, and must be foreseen by the artist from the earliest stage of his conception. It may even be its starting point, as it appears to have been in the case of the Japanese handscreen on page 24, in which the bamboo of the handle is shredded and spread out to hold the paper; or where the flat handle is made to expand at one end, in order to embrace the gathered shreds radiating from it; or where the haft of a screen of plaited bamboo is overlaid with strips of the same, at once enriching and giving grip to it.

The handle on page 23 is made out of a single length of bamboo which has been notched away where it bends over, leaving only a thick outer skin to cover the joint. It is curiously appropriate, by the way, to the lacquered measure to which it is frankly attached by narrow ties of bamboo.

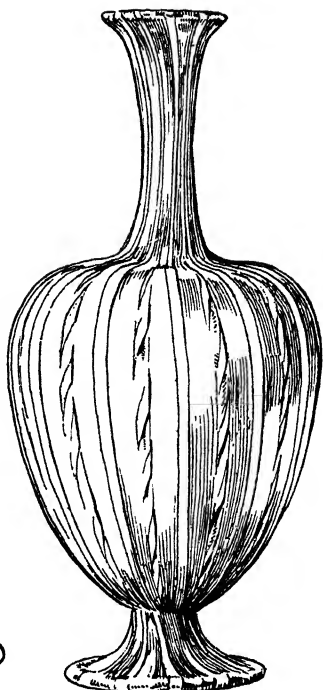
The handle from which the bronze kettle on page 23 is suspended, after a fashion common in Japan, appears to have



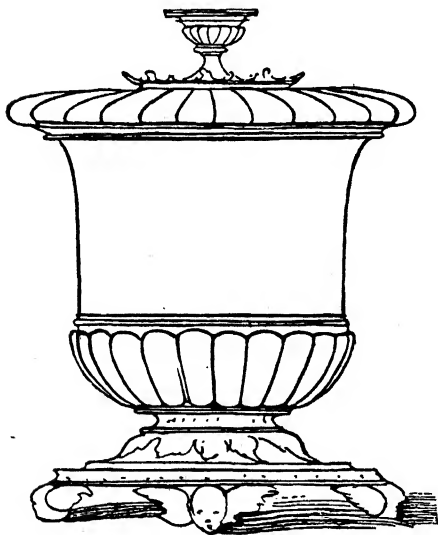
14. JAR SHAPE APPROPRIATE TO EARTHENWARE, BUT WITH EXCRESCENT ORNAMENT.

been devised with the idea of conducting the minimum of heat to the hand of the person holding it. It consists of closely compact copper wires entangled with loosely twisted ones, all brazed together at the ends, which hook into the eyes attached for that purpose to the body of the kettle. A handle solely for effect is artistically as superfluous as it is practically useless; and not much more is to be said of a second handle for symmetry's sake.

The few instances given will be enough to illustrate what is



15. SHAPE APPROPRIATE
TO BLOWN GLASS.



16. SHAPE APPROPRIATE TO
EMBOSSED SILVER.

meant by the contention that ornament is not something added—that applied art need have nothing to do with additional ornament, and is in fact at its best an integral part of the thing adorned.

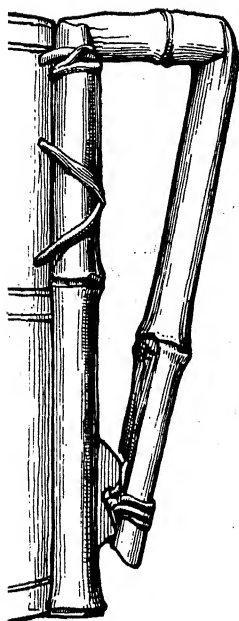
Applied art means only practical art. The

truth is, design is not a matter of emotion merely, but of logic also. It is deduced, whether we realise it or not at the time of designing, from the conditions of the case in hand, from the use and purpose of our work, the material available, the tools in use, the length of time or the amount of labour it is possible or desirable to expend upon it, from circumstances quite apart from the purely artistic question. Artists unaccustomed to work under con-



17. SHAPE APPROPRIATE TO CAST AND CHASED BRONZE.

ditions do not realise this, and find it difficult to believe. But practical experience in design leaves no doubt about it. In the case of design for manufacture it hardly needs demonstration. Take wallpaper printing. The given conditions are something like these: a dwelling-room of ordinary proportions, to serve as drawing-room, dining-room, bedroom, as the case may be; Gothic, Palladian, or nondescript architecture; fixed width of material; convenient dimensions of the printer's block; its material, wood or metal; the opaque



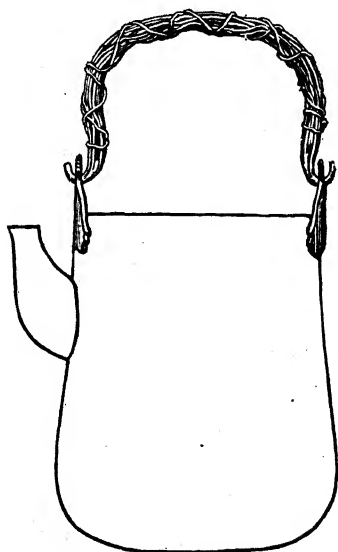
18. BAMBOO HANDLE.

hands, will be in many respects different; but in his case, no less than in that of the man who works for a trade, applied design is always the solution of a problem. Such and such things being so and so, given such facilities, failing such other possibilities, what is to be done? He answers the question according to his art—but according to his intelligence also. Applied design makes never-ending demand upon common

quality of distemper colour; the number of printings commercially worth while. In short, the requirements of the public, of the decorator, and of the paperstainer, have all to be satisfied. How best to meet them, that is the problem which the artist has to solve in his design.

And it is so with other manufactures. In cotton printing there is the important consideration of dyes and mordants, in weaving of the jacquard loom, in pottery of clays and glazes, and the action of the fire—which to ignore is to court disaster.

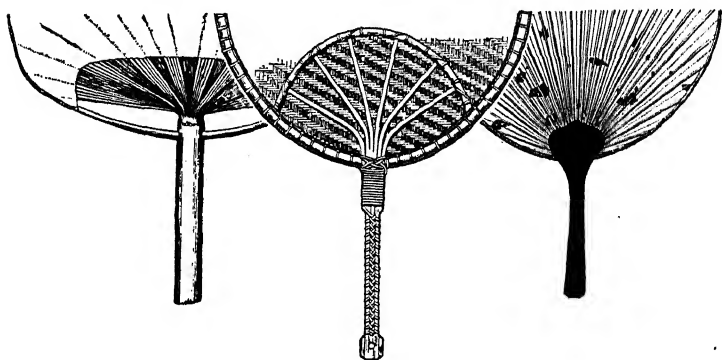
The problem of the artist not connected with manufacture and who executes, it may be, his design with his own



19. WIRE HANDLE.

sense, a faculty which was never common, least of all among artists. That is why draughtsmanship is so much more frequently to be met with than design—a matter of feeling, no doubt, but of feeling under control, or perhaps more strictly speaking of feeling and reason combined, of logic as well as of art.

This logical side of the designer's faculty is not commonly enough recognised. In acknowledging the *art* of design we do not sufficiently appreciate the element of science which goes to it—which goes, it might be said, to achievement in art generally, but which is indispensable in art applied—the faculty, in fact, which guides us in its application, which steadies us and keeps us sober. Arab art, as we call it, which is more consistently ornamental than any other, is the work of a mathematical race if not of mathematicians. The orderliness essential to ornament generally is more a matter of the mind than of emotion. It may be doubted if any one will ever be very successful in applied design who is not capable of thinking out a question, balancing with something like precision what is for and what is against a step in design before he takes it. Applied design may or may not be imaginative, it must be logical.



20. HANDLES OF JAPANESE FANS.

IV. THE CHARACTER WHICH COMES OF TREATMENT.

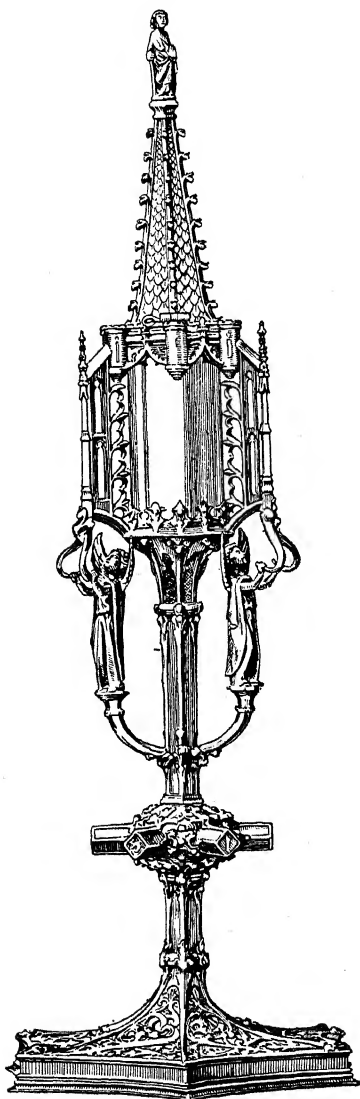
Processes give rise to appropriate ornamental form—Examples: clay, metal, &c.—Ancient ornament to be studied from the point of view of its application to material and process—Intelligent design—Appreciation of “treatment”—Natural form only the food of the artist—Conditions of manufacture leave their mark upon design—The treatment appropriate to design in itself of value, or of none—Design indicative of embroidery, of weaving and of various kinds of weaving—As affected by printing and by different kinds of printing—As affected by the use to be made of a woven or printed stuff—Lace design of various kinds—Embroidery design—Tile design and its relation to enamel—Design adapted to inlay and mosaic—Translation of design into the terms of craftsmanship.

THE fit treatment which it has been agreed to call “conventional” gives character to ornament. A new method of work gives rise to a new style of design.

A process of work itself gives rise to ornament. What is more, the forms arising in this way are sure to be appropriate.

Natural forms must needs be reconciled to their new conditions; forms which grow out of conditions are ready shaped to the hand of the designer. Ornament so formed is by birth, what ornament founded upon nature is only by adaptation. Material, tools, and methods of technique have determined it; and further treatment is unnecessary.

There are generic qualities of design which, when once our eyes are open to such things, we recognise immediately as belonging to wood or iron, clay or textile fabric, to carving or forging, to modelling or weaving, as the case

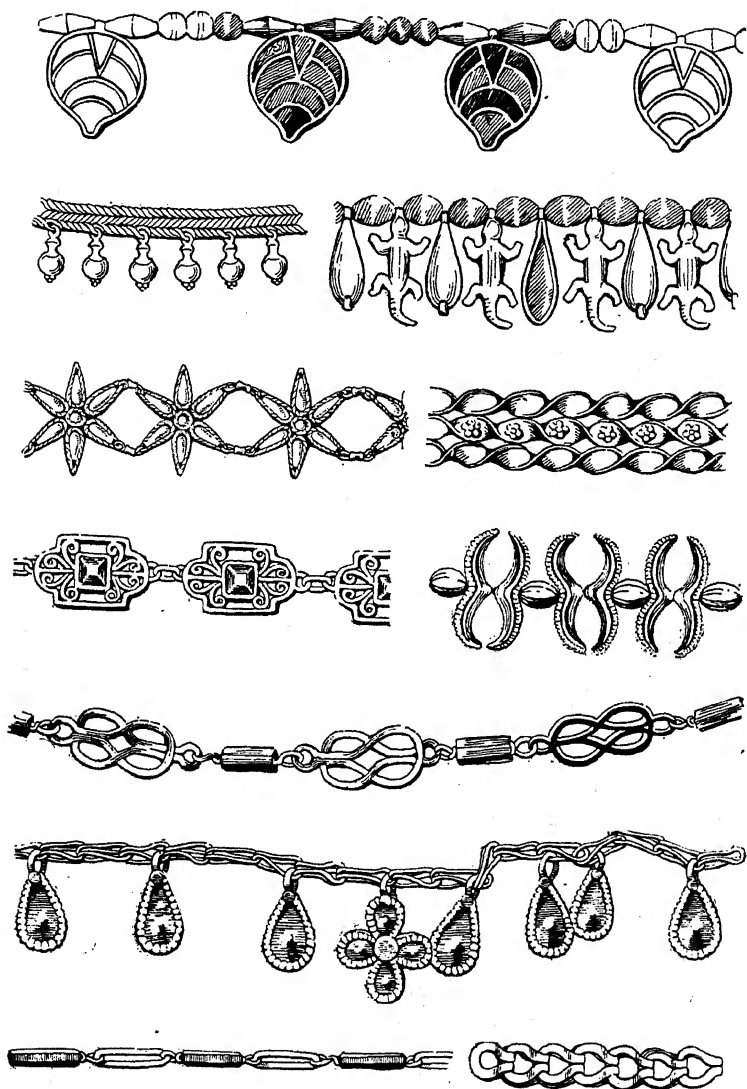


21. FIFTEENTH CENTURY SILVER
GILT RELIQUARY.

may be. The material employed proclaims itself, it may be emphatically, it may be without asserting itself positively; but its influence is nearly always appreciable. This character in ornament is neither arbitrary nor accidental. It comes of following the hint which materials, tools, and ways of work, are so ready to give to the designer, and of his endeavour to get out of them what they can give and give best.

A practical designer of sufficiently wide experience can often tell at a glance the material of which a thing is made. Its shape alone tells him that a vessel is of clay, or of metal, and perhaps what kind of clay or metal.

The least experienced in such things hardly want telling that the reliquary here given (21) is silver, for all the architectural character of its design, or that the jewellery on page 27 is of gold. It is derived from various sources, Egyptian, Greek, Roman, Anglo-Saxon, Spanish; but whether it is beaten up from thin plates or drawn out in wire, bent into filigree, or twisted into chains, whether they are little pearls



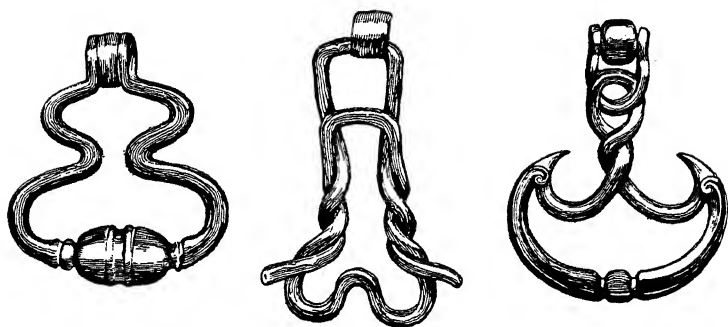
22. ANCIENT GOLDSMITH'S WORK.

of gold that are soldered on, or cloisons to hold inlay of lapis and other precious stones, everywhere the ductility and yielding disposition of the metal is to be perceived, to say nothing of its fusibility. And so with other ornamental detail, a workman sees at once that it was designed to be done with a brush, a point, a chisel, a punch or a hammer. In the naïver work of early days this kind of character reveals itself more plainly than ever.

The stiffish curve which comes of bending an iron rod into shape, as in the knocker, opposite, to the left, is wholly different in character from the subtle undulation in the handles of the Venetian glass vessels on pages 30 and 31, which tell by a sort of sudden droop in the curve that they were shaped whilst the material was red-hot. So also the stiff twist in the iron handles is characteristically unlike that in the soft clay handles of the earthen jar on page 129.

The source of all practical design is in the sympathetic appreciation of material. We are born with sympathy (or, alas, without it); but it grows with knowledge, and appreciation comes of understanding. The secret of appropriate treatment is best learnt from the study of what has been done in the way of practical design, and from the observation of its relation to technique, old or new.

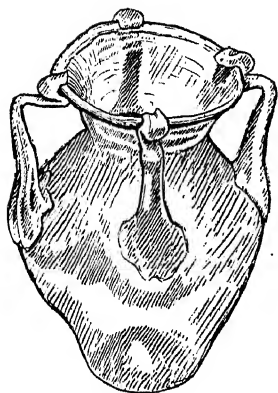
The way to get at the root of ornamental design is to ask yourself always in the presence of a satisfactory piece of work *why* the artist did just so. At first you can but conjecture; but, as you compare, and test, and cross-examine, conjecture grows into conviction. You say to yourself: This kind of thing occurs so continually in iron work, that so constantly in textile fabrics, there must be something in the nature of the metal or of the stuff, in the art of smithing, or of weaving, to account for it; and, with a very little knowledge of the craft, the light of certainty breaks in upon you. And one such secret solved is the key to another.



23. TWISTED IRON HANDLES AND KNOCKER.

It is a mistake to suppose that there is nothing to learn from processes which modern mechanical appliances have superseded. Methods of work may change, but the nature of materials does not. Many a new device has failed for want of attention to what the old one would have taught the innovator. Old work would teach us, if we had the modesty to study it, how to go about ours in a new way. The changes we have made are not all in the direction of progress—unless we are to call that progress which is in the wrong direction.

Design—and still more its application—makes considerable demands upon the intelligence. Art is to a great extent a matter of sense. It *may* be almost entirely sensuous, not taxing the intellect. There have been artists, and artists of great ability, who, apart from their painting or whatever it may have been, were rather stupid. It is not from excess of intellectuality that actors and musicians as a rule suffer; they cultivate the emotional at the cost of the intellectual side of their nature. Design, however, and the fit treatment of it, depend as much upon the judicial as upon the purely artistic faculty. It depends throughout upon the appreciation of actual conditions, a



24. GREEK VESSEL WITH HANDLES—SUGGESTIVE OF THE RED-HOT GLASS.

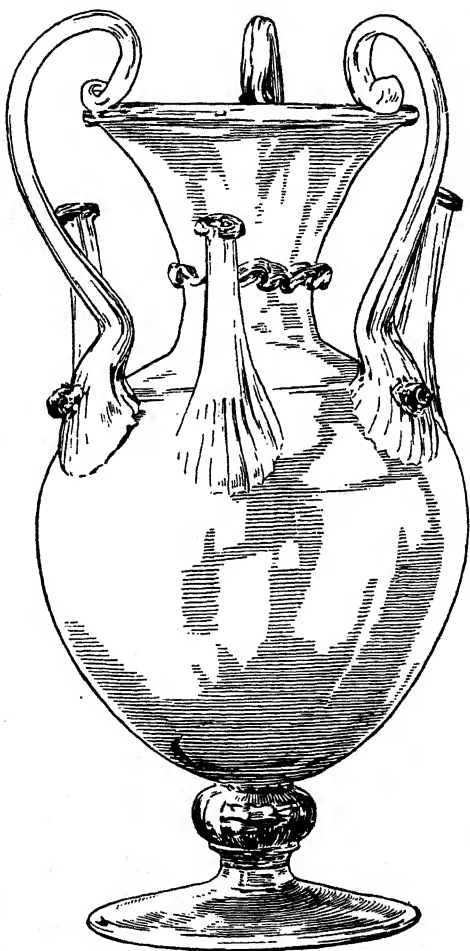
faculty, it is true, no more common than that of design; but without it a man is not equal to the demands it makes at every turn upon his mother wit. For it is always the outcome of conditions, always in answer to something. It has to be thought out—not merely felt; and in proportion to the clearness of the artist's mind is the practicality of his design.

To the necessary equipment for practical design there go, intelligent appreciation of conditions (the outcome of a logical mind), readiness to meet them (implying sympathy), suppleness in coping with them (which asks resourcefulness and skill).

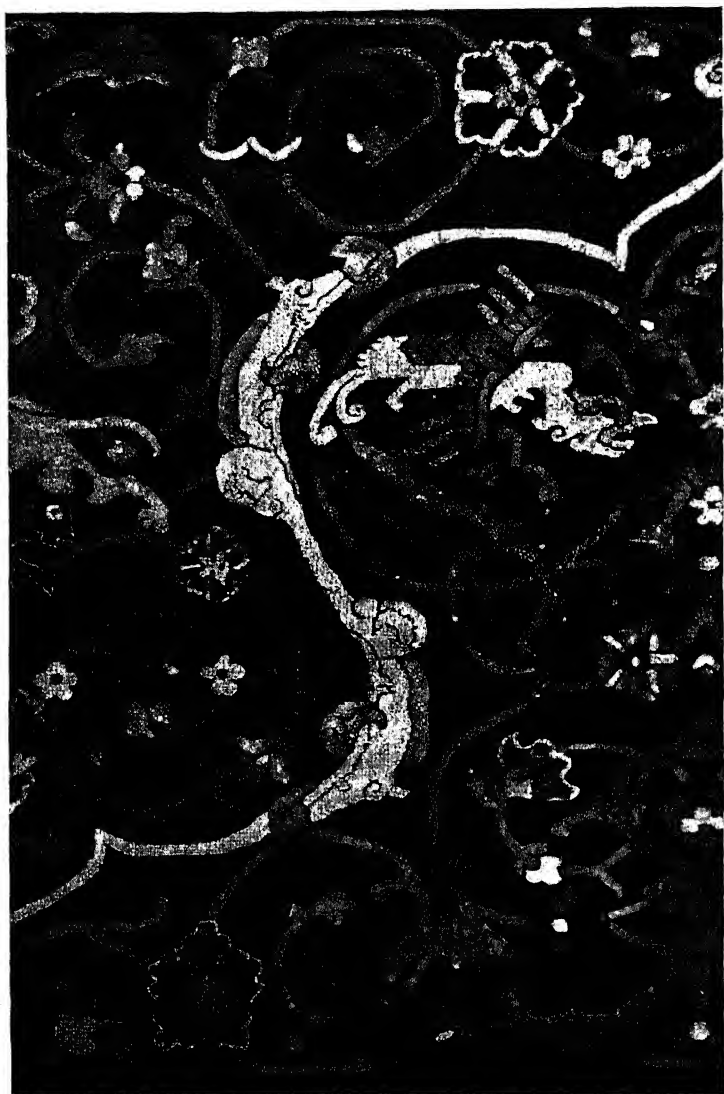
It is necessary, in view of the theory that art is nothing but emotional, to lay stress upon the mental side of design. It is only one side, of course; but it is the side upon which success in practical work largely depends; and it is the one most commonly neglected. There are twenty who can draw or paint for one who, when it comes to purposeful design, knows what use to make of drawing or modelling.

A student of design must keep his mind open as well as his eyes. He has to learn what to see and how to see it. That, it is sometimes said, he must discover for himself; and it has been urged that students taught to see, end in seeing only what they have been taught. Well, then, they had never either eyes or mind of their own, and they may as well see with the eyes and think with the mind of those who have both. What if we do begin by seeing very vividly what we have been taught to see? Suppose for a while we see nothing else! Is there any

harm in that? Surely not. One great use in teaching is to show us what is there, to make us see it, and see it in focus. Half of the art of teaching *is*, to teach us what to see, and how to see it. It is to claim very little for a man's personality to suggest that he will see for long through any eyes but his own. No harm will be done by his seeing for a while through the eyes of artists more experienced than himself and better able to appreciate. It will never in the end hinder his individual outlook — supposing him to have one, or to be capable of having one. On the contrary, his trained sight will be the keener to discern every slightest detail which concerns him personally. What more can age do for youth than lead it open-eyed into the paths trodden smooth by experience for its uncertain feet?



25. VENETIAN GLASS WITH
CHARACTERISTICALLY CURVED HANDLES.

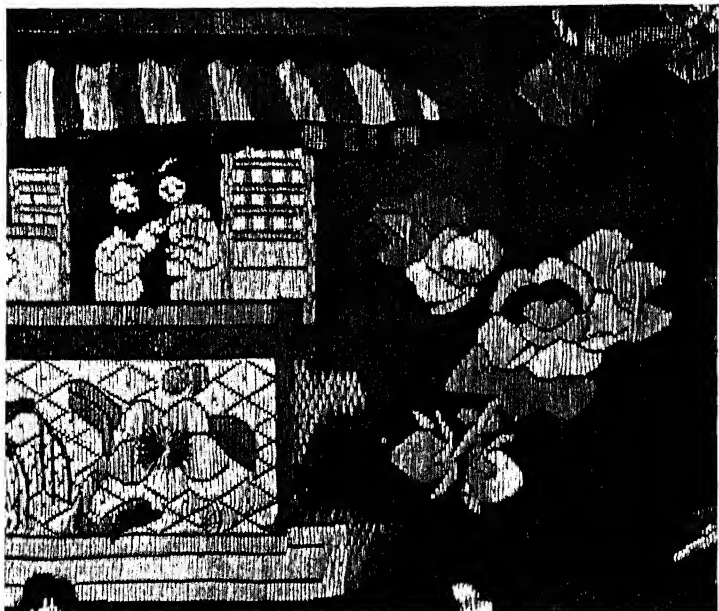


26. BROKEN LINES OF CARPET WEAVING.

It would be difficult to lay too much stress upon "treatment." Therein lies the whole secret of designing ornament strictly so called. The very purpose of ornament, its position, the lines of its construction, the manner of its production, call for and insist upon it. There is no form of art in which it is not necessary—unless it be that of men whose boast it is to leave design out of their pictures, and in



27. STEPPED OUTLINES FOLLOWING THE SQUARE MESH OF NET.

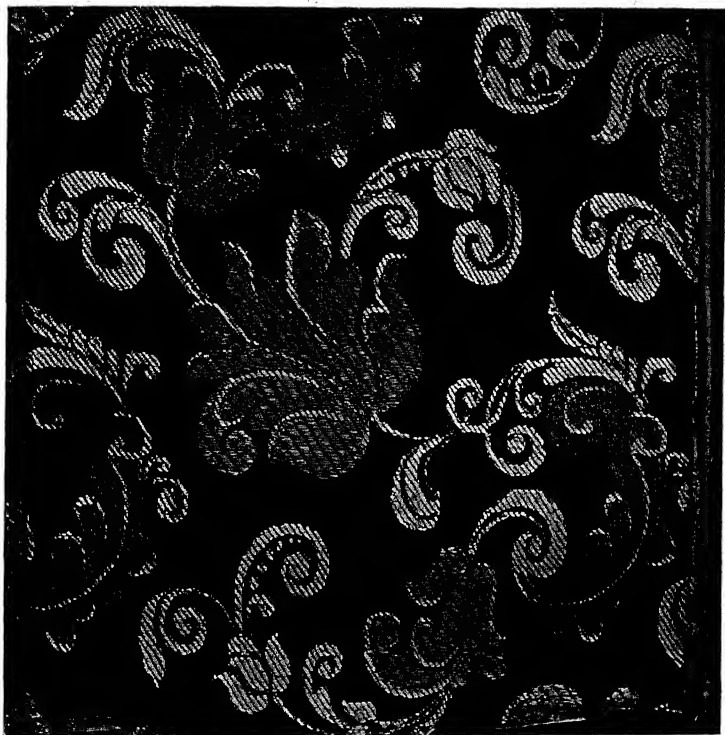


28. CHINESE EMBROIDERY INFLUENCED BY THE CANVAS GROUND.

whose eyes it is a positive demerit in a work of art that there should be composition in it. And even these advocates of artless art ask for some sort of treatment in painting, though it may consist in depicting nature as it appears to short-sighted people who see everything in a haze.

It is according to its treatment that we pronounce a design to be appropriate and workmanlike or the reverse. Fully to realise the treatment befitting some fixed place or purpose, some available material or convenient process of work, is to have mastered the first principle of ornamental design.

Fit treatment is, in fact, the translation of natural or other form, not merely into the language of art, but into



29. BROCADE WEAVER'S "BINDER" TURNED TO ACCOUNT IN DESIGN.

the dialect of some particular handicraft. We detect in it the homely accent of sincere workmanship. It is that which charms us in mediæval or other simple ornament by no means cunning or accomplished. It is because we find in it no turn of native or vernacular expression that modern manufacture is so dull.

The part which nature plays in ornament is discussed at length elsewhere.*

* "Nature in Ornament."



30. BROKEN LINE IN SATIN TISSUE.

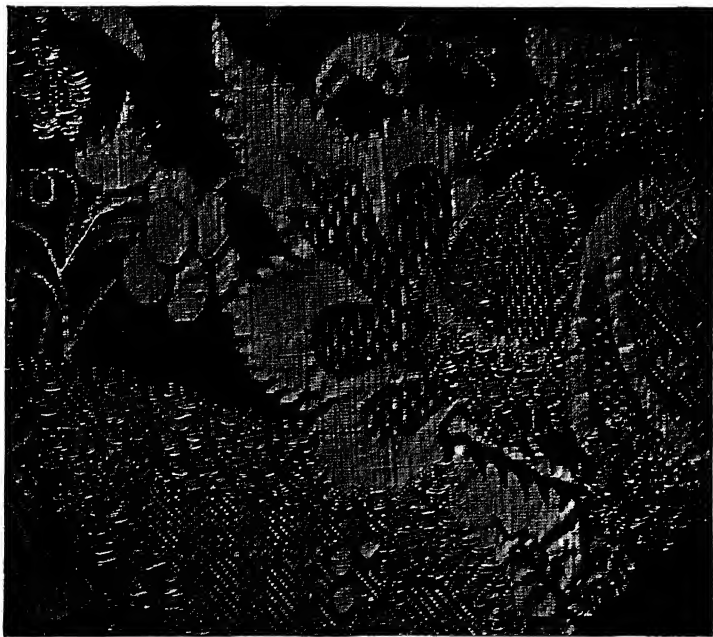
There is usually in ornamental design some relation to natural form; there is always some occasion, if no actual necessity, to modify the forms derived from nature according both to the nature of the work and the method of its doing. The designer is confronted with the questions: how far it may be well to go in the direction of nature; to what extent must he accept the ruling of artistic fitness; how far shall he submit to the dictation of conditions, and especially of the materials and tools he works with? These are questions only to be answered in so far as they apply to a particular case. The balance between art and nature has always to be struck afresh.

Broadly speaking, one may say that natural form is the food of the artist; how much of it he may apportion to himself depends upon what he can digest. It is a question of the man's powers of artistic assimilation—always an uncertain quantity. That which is barely enough for one man's nourishment will lie heavy on the digestion of

another. And, then, there are times when a man craves for natural sustenance, times when he is easily surfeited with it.

Precisely the same difficulty occurs in determining how far the artist should adhere to some preconceived idea he may have when he sets out to design, and how far he should allow conditions to affect it as they arise. All that is certain is that in applied design and ornament he must allow them their due weight. It may be very considerable.

There comes a point at which treatment is peremptory—though it should consist merely in leaving out so much as it is impossible to render. That amount of convention



31. TISSUE IN WHICH TINTS ARE REPRESENTED BY DIAPERS.



32. SILK IN WHICH THE TINTS ARE GIVEN BY DIAPERS.

is not to be gainsaid. But long before the point of impossibility is neared we reach the limit beyond which it is at the risk of consistency that we go on, the point at which conditions begin to rule, where art dictates convention—some sort of treatment, that is to say, which the work itself suggests. To begin with a case about which there is no dispute: whether, for example, ornament is woven or printed, how it is woven, or on what it is printed, are considerations seriously affecting its design—if it is to answer in any sense to the term “applied.”

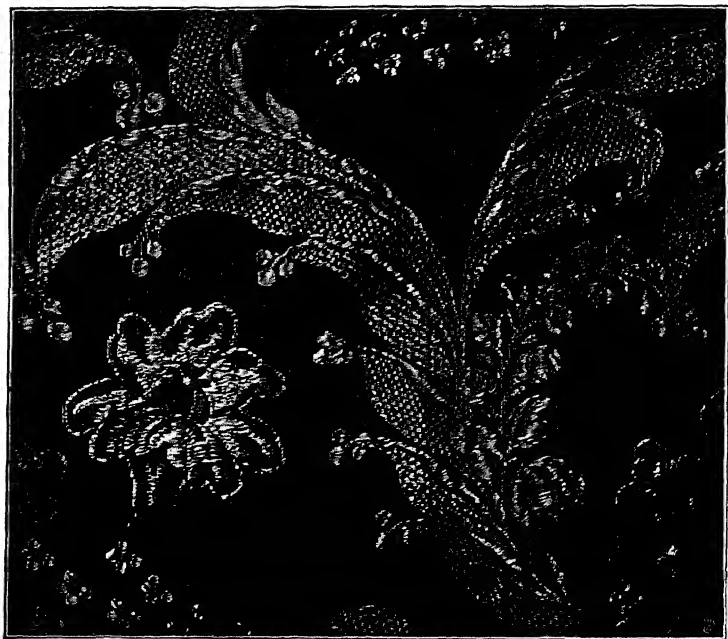
It has been shown already (“Pattern Design,” page 131 *et seq.*) how the conditions of the loom, of the wood block, of the

copper roller, affect the planning of pattern ; how in weaving the pattern is easily turned over ; how the colour follows the lines of warp and weft, and gives stripes, checquers, and so forth ; how, in fact, the reversing of the design and the band-wise arrangement of colour (characteristic of Byzantine, Sicilian, and early Italian silks) belong to the loom. The

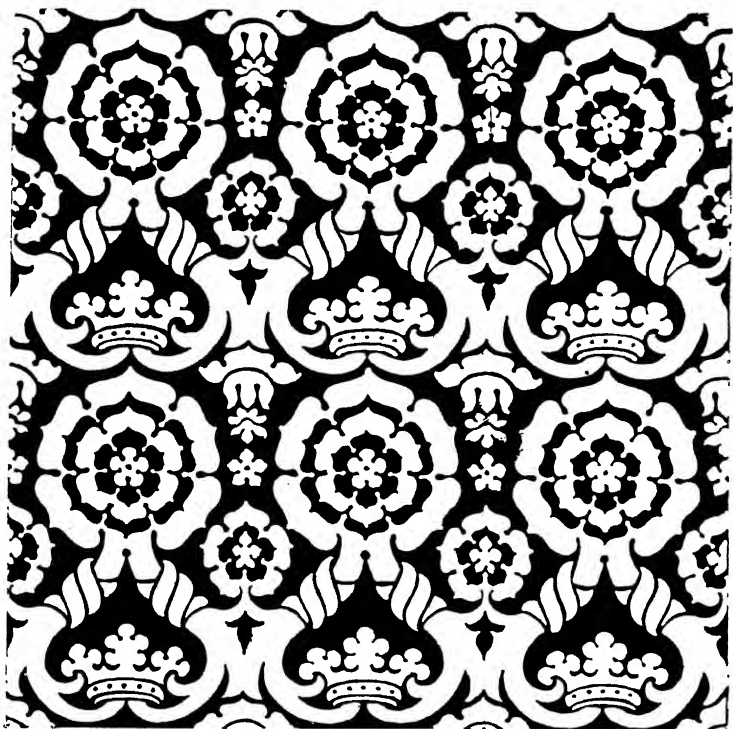


33. SHADING SUGGESTED BY DIAPERING.

kind of weaving employed leaves also its mark upon design. The relatively coarse weave of a carpet affects not the scale of the pattern only but its lines (26). It is not merely that they are jagged at the edges, or stepped according to the tesserae of wool (a carpet is properly a sort of mosaic of square tufts), but that it is impossible to render delicate curves: they become at the best broken in the weaving; and the rational thing for the designer to do is, either to depend upon the square and diagonal lines that carpet weaving gives, or to rely (as the Orientals do) for his effect on colour, as to which there is in hand weaving literally no restriction. It is, after all, the more important thing in a carpet.



34. BROCADE IN WHICH THE TREATMENT IS NOT BEYOND REPROACH.



35. BROAD TREATMENT OF OLD VELVET DESIGN.

A similar difficulty besets no less the needle-worker following the lines of a pronounced square mesh (27). A distinct, by no means unpleasing, character comes of frankly following its lines. It is wonderful what an artist with an eye to the essential in form can do in the way of rendering it under strict limitations, for example in darning rigidly confined within the square lines of open net. Naturally the needle-worker chooses the forms which she can render, and modifies them in the direction of the mesh. More cunning advantage is taken of the square lines of a canvas ground by the Chinese embroiderer (28), who, though working



36. PRINTED VELVET WITH COLOUR IN BROAD MASSES.

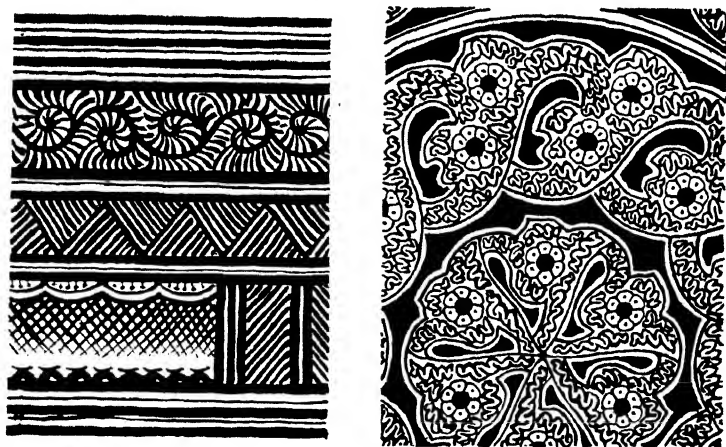
in satin-stitch, follows its lines strictly, and by the length of the stitch (or more properly its well-judged shortness) gives not only the drawing of the design, but very pretty diaper work. The key-patterned background is most ingeniously chosen. It was absolutely necessary, unless the silk was to float dangerously loose upon the surface, to shorten the stitches. To have done that, and at the same time to have diapered the ground with pattern judiciously contrasting with the more important pattern work, is proof of considerable mastery in applied design. The embroiderer was under no sort of obligation to work on the square lines of the



7. COTTON PRINT—"BUSY" PATTERN APPROPRIATE TO A POOR STUFF.

canvas; but, having determined to do so, has played the game, except in the single instance of the stamens of the flower which radiate from the centre—a hint, as it were, that the worker was not so bigoted as to admit one only way of artistic salvation.

Another method of overcoming the objection to long “floats” of silk upon the surface is to stitch them down as the needlewoman does in “laid work,” a process effectually



38. JAPANESE AND (39) PERSIAN EARTHENWARE IN WHICH A SCRIBBLE OF LINES IS USED TO GIVE TEXTURE.

ally imitated by the weaver, who in brocade (which is a kind of mechanical embroidery upon the surface of the stuff, and no part of its texture) binds down the floating floss by cross lines of weaving. In the example on page 35 a difference of texture is given to the more leafy part of the scroll by bringing the diagonal “binding” lines closer together than in the more flowery parts of it.

Even in silks of relatively fine texture it is not artistically desirable (though nowadays mechanically possible) to



O. CRETONNE PATTERN IN LINES AND DOTS CONVENIENTLY TO BE
DISCHARGED.

obliterate the square jaggings of the outline altogether. A slight "step" in the line softens it, at the distance from which the stuff is usually seen; and when you get near to it it tells its tale—to some of us, at all events, an interesting one—witness the old silks on pages 36, 37, 38, in two of which is to be noticed, in addition to the "stepped" outline, the diapering of parts of the design, always in patterns frankly built upon square and diagonal lines. This is really a device of the weaver for getting intermediate shades between ground and pattern colour without using more than a single shuttle. The happy practice lingered, as will be seen on page 39, even to a period when design was falling into naturalistic ways; but, so long as the attempt at shading did not go beyond what is seen in the satin tissue there illustrated, all individuality was not lost. It is impossible to compare the clumsy ugliness of the flower in the brocade on page 40 with the delicate and dainty lace-like patterning of the more conventional ornament without realising the wisdom of designing, so to speak, with the woof of the stuff; and this an expert never fails to do.

The texture of a material makes all the difference in the kind of pattern appropriate to it. A damask or velvet designer appreciative of the material designs his pattern, as in the fifteenth century example on page 41, broadly, to show the material to advantage, and keeps it flat, because he can rely upon its varying sheen to save it from possible harshness. It is the worst possible policy to adopt in designing for a noble material a method calculated to disguise the poverty of a base one. The weavers of shoddy have so naturally had recourse to fussy patterns that any textile worried all over with pattern lays itself open to suspicion.

We owe the looser character of the later Lyons silks partly to a loose age, but partly also to the fascinating colour of brocaded silk. In any less lustrous material it

would have been seen how ugly were the forms of the design. True, in a dress fabric it is the colour that is important; but that is no reason why an artist should



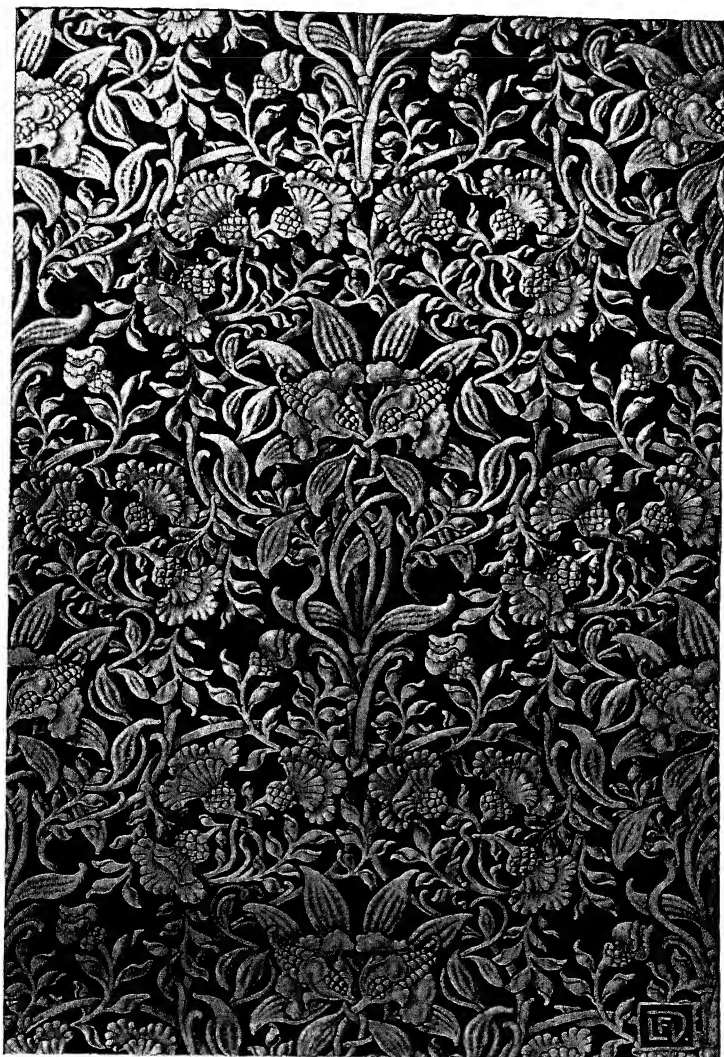
41. PATTERN IN WHICH THE OUTLINE IS LEFT CLEAR BETWEEN THE TWO PRINTS—NOT SAFELY TO BE DONE IN BLOCK PRINTING.

not take some heed of the forms he employs. Designers of an earlier period, more seriously considerate of their art, have shown that care in this respect is not incompatible with perfect colour—that it goes, on the contrary, to the beauty of the fabric.

Plenty of plain ground is the obvious device for showing the quality of damask, velvet, wood, marble, or whatever the intrinsically valuable material may be. But it is not the only one. Big patterns with broad surfaces show equally the inherent beauty of a rich material, and may therefore with advantage be allowed to crowd out a less significant ground.

It follows from what was said above that full and crowded pattern has its uses. The comparatively fussy detail which demeans a fine material helps to redeem a mean one. Printed wall-paper, for example, or common calico, wants detail to give it a richness which in itself it has not. There is a richness even in cotton velvet which allows one to indulge in flat masses of rich colour (36); and in printed linen, too, the material gleams through the dye and gives life and brilliancy to broad patches of colour; but in printed cotton flat colour looks dead and lifeless. The old cotton printers used what they called a “pinning roller”—a wooden roller (for hand printing) into which brass pins or wires were driven. The dots printed from this roller relieved the flatness of the printed colour, and gave “texture” to it. William Morris adopted this idea of dotting in his cretonne and wall-paper design with admirable effect. It became in his hands an admirable convention in place of more natural shading.

Ornament might well be described as, in the first instance, a means of getting texture—of making a difference between one part of a surface and another. It may be mere scribble with that purpose—and was often not much more. The pattern from a piece of Japanese stoneware (38), roughly drawn



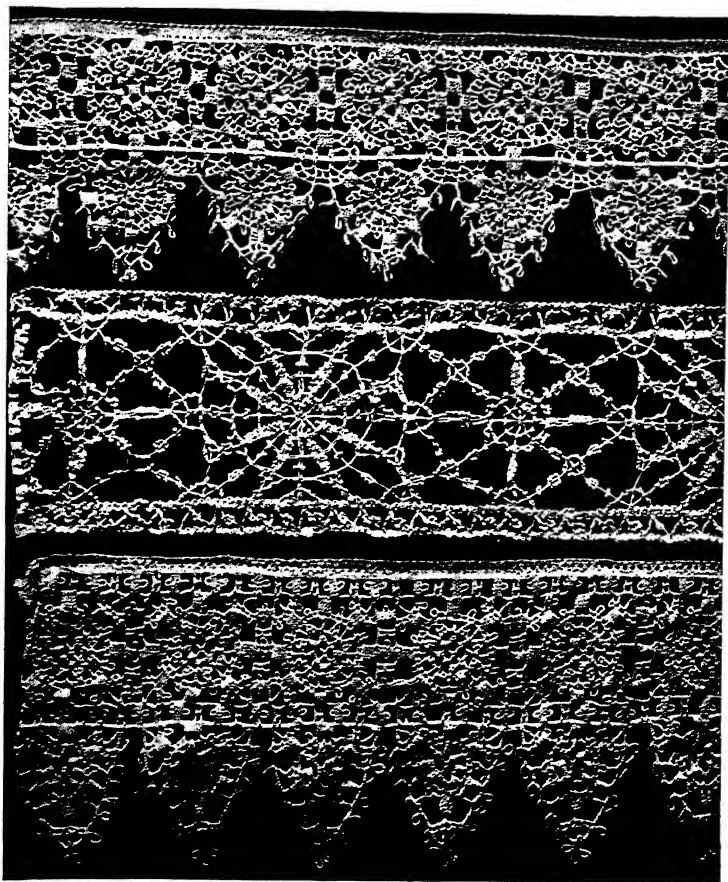
42. EMBOSSED WALL-PAPER, IN WHICH THE HIGH RELIEF IS KEPT CLEAR OF THE JOINTS.

in brush lines, is not much more than scribbling to give a texture or tint, and the pattern on the pattern in the Persian earthenware (39) is still in the nature of a scribble. There is no reason why such unconsidered scribble should not develop into more coherent pattern, as in the cotton print, on page 43, the relation of which to the last mentioned Persian earthenware will reveal itself at a glance. The enrichment of ground and pattern with secondary pattern—both alike overgrown with it—in order to make amends for the poor quality of the colour, gives a certain mystery to it which goes towards reconciling one to the absence of sheen in a cotton print. In a woven stuff of any worth it would not have been necessary thus to inhabit every part of the stuff with small pattern. There is yet another reason for the be-diapering of the main forms of the ornament, and in fact, for drawing the pattern in fine lines and dots, as in the cretonne on page 45, if it is to be *discharged*. It is possible for the dyer, it should be understood, to get a much deeper and richer ground colour than could be printed. Hence a practice of first dyeing the cloth and then discharging the pattern, or, what amounts to the same thing, printing in a medium which will *resist* the colour and then dyeing. There is always a risk, however, that the discharge or resist may not be perfect. The colour discharged may stain the white cloth, and stain it unequally. This, which in the case of flat surfaces might be very objectionable (at all events to the Philistine purchaser of the goods), is barely perceptible in lines and dots; and so there arises occasion for a kind of pattern which, to those who know the process, is confessedly designed for discharge or resist printing.

There is a difference, again, between patterns appropriate to block and to roller printing. The difficulty of printing first the ground and then the pattern (or some part of it, as in the cretonne on page 47), so as to leave a clear but narrow outline between the two, would be so great in block printing that it

would not be worth while to attempt it ; but a designer for roller printing may safely expect the printer to register his two prints so exactly as to give him the line he wants.

A wall-paper printer has to bear in mind in his design the consistency of thick distemper colour, which would clog the



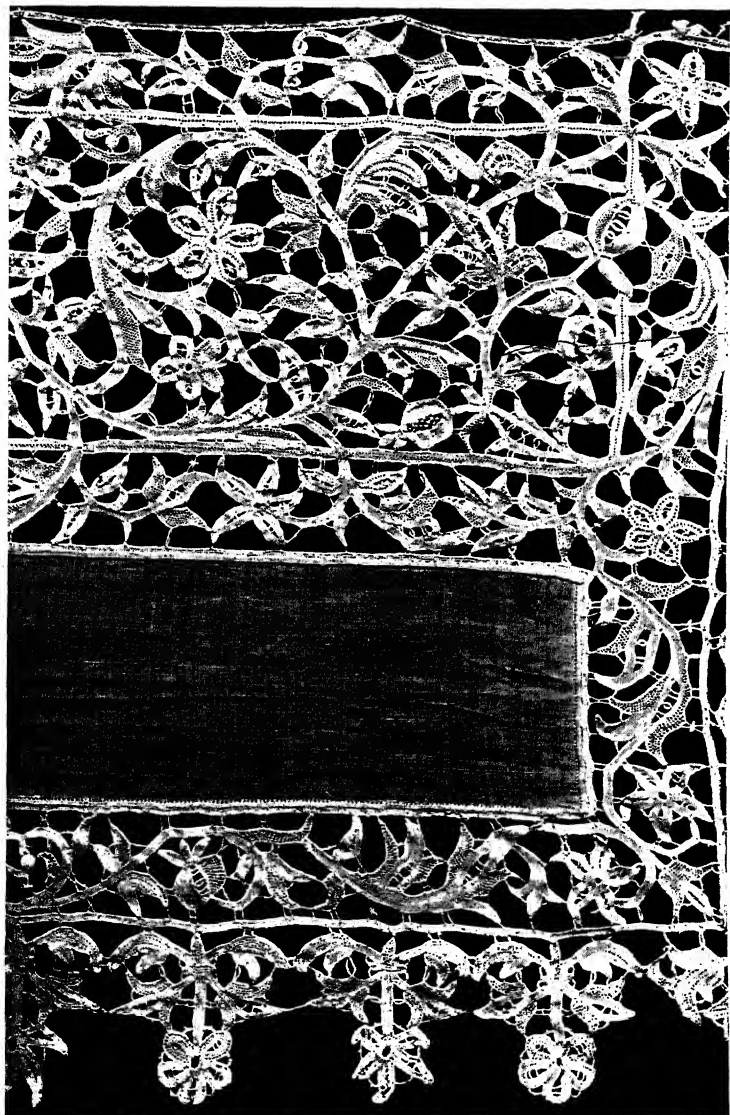
43. SO-CALLED GREEK LACE, SHOWING, IN THE SQUARENESS OF ITS FORMS, TRACES OF ITS LINEN FOUNDATION.

fine lines a printer in dye has no difficulty in leaving open. He has to plan a gold ground so that very little of it occurs on the joint, where there is always a difficulty of avoiding a discrepancy between the printing of one strip and another ("sheerness" is the trade term for it). So in a highly embossed paper, such as that on page 49, parts in very high relief must escape the joints. On the other hand, the block printer has the option of blending and "patching" his colours so as to get variety of colour out of a single block. But all that has to be ingeniously planned, and seriously affects the possibilities of design.

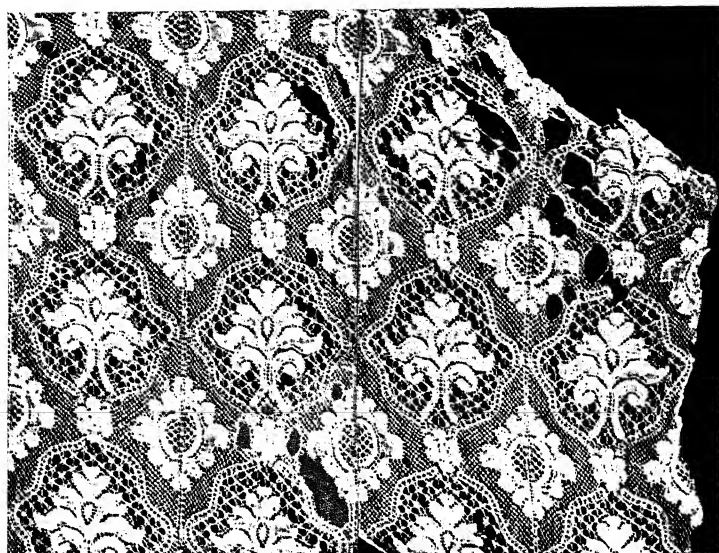
The purpose of the pattern, again, to hang in folds, to be used for curtains, or straight on the walls, or for furniture coverings—is for the designer to consider; and whether a wall pattern is to be in itself attractive or a mere background.

The prospective purpose of the material affects equally the hand-worker—painter, stenciller, or needlewoman. This it is which has determined the comparative dignity and frivolity of the earlier and the later kinds of lace—once designed for church furniture or ceremonial costume, and by degrees accommodating itself to the conditions of modern dress.

The "Venetian point" on page 51 shows in its square design, like all so-called "Greek lace," the lingering influence of the linen foundation out of which it is worked. It is the culmination of "drawn" or "cut" work; and this trace of a groundwork which has practically disappeared is a pleasant reminder of the process. In lace not worked out of a foundation but stitched "in the air" as the Italians say (44), the square lines properly disappear from the design. A clumsy modern imitation of "Greek lace" in crochet has prejudiced us to some extent against it; but it is in its way as delightful as the "punto in aria." Both are as beautiful as they are characteristic of the way they are done. A feature in this last is the variety of filling stitches which, like the geometric patterns already referred to in weaving (page 46),

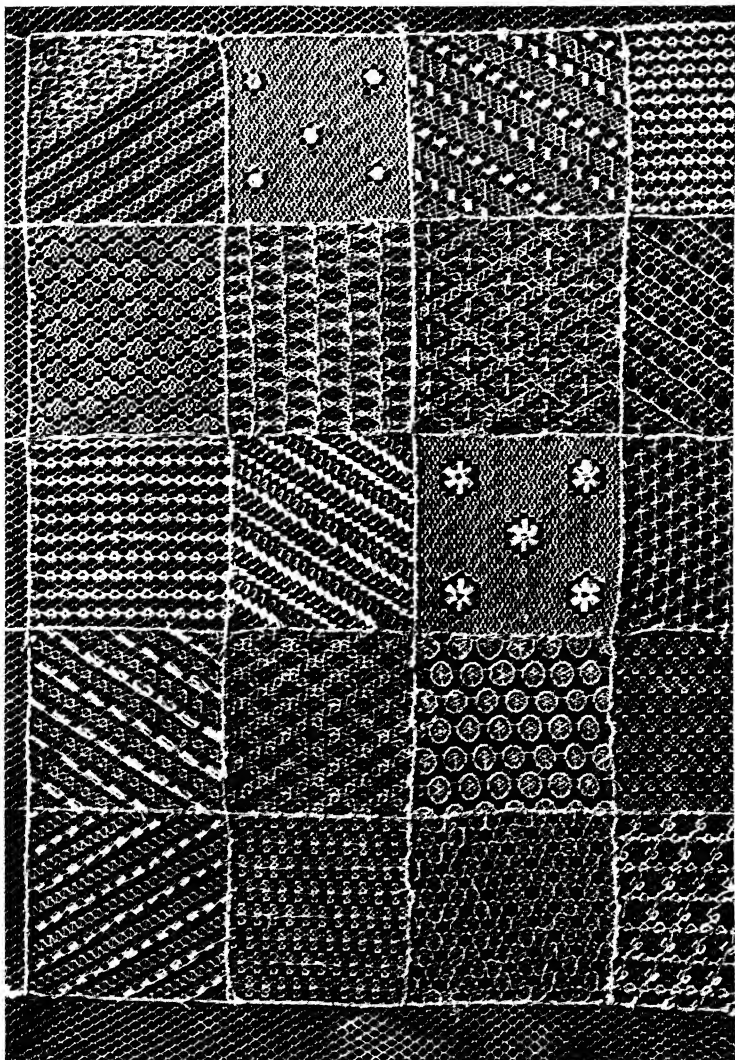


44. VENETIAN POINT OR "PUNTO IN ARIA."



45. BUCKINGHAMSHIRE PILLOW LACE.

give the effect of tint, lighter or darker according as they are worked close together or open. The lighter the lace the more important becomes the consideration of these "filling stitches"—not stitches in the strict sense that a new way of using the needle constitutes a "stitch," but more properly speaking diaperings done with the needle. In pillow-made lace half the battle of design is to provide for well-planned difference of more or less gossamer groundwork, effectively contrasting with the simple net ground, and with the relatively solid but never dead white pattern on it. The specimen of Buckinghamshire lace above shows, in addition to the net, an open and an intermediate filling or *réseau*: the patch of very fine net *is* a patch. It shows, too, how convenient the pillow-worker finds it to work in narrow strips. The *réseau* of the bobbin-worker will be found on



46. "LIMERIC" FILLINGS—NOT LACE BUT EMBROIDERY ON NET.



47. APPLIQUÉ EMBROIDERY WITH COUCHED CORD OUTLINE.

inspection to take very different lines from the diapers worked out of ready-made net in what is called Limeric lace (46). It is really embroidery upon net. Whatever may be said against machine-made net—and it is *not* beautiful—it will be seen that it may be pulled out of its mechanical lines and compelled into characteristic pattern. Where that is done, and the hard net does not show through, it is only prejudice that can object to it. When the common net is left to show harsh and even under the embroidery it ceases to have artistic interest.

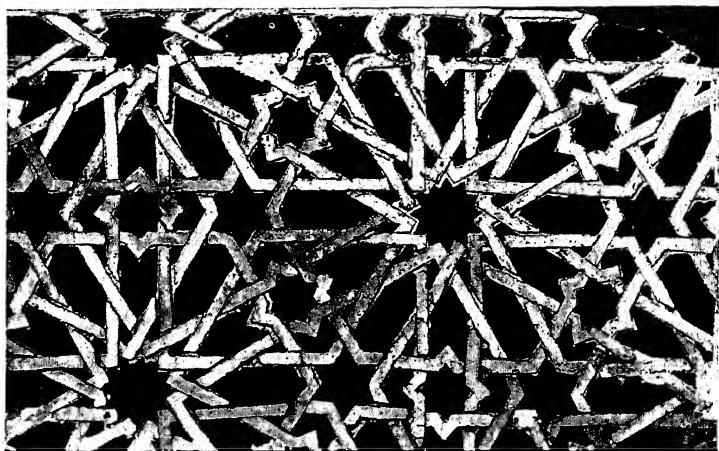
Embroidery is too large a subject to treat shortly, and I have elsewhere* said what I have to say on the subject. Design and stitch are inseparable one from the other. The artist has not only to think of a design for embroidery, but

* "Art in Needlework."



48. ROSE POINT LACE WITH "CORDONNET" OUTLINE.

for a particular stitch or method. The actual stitches may either follow the forms of the pattern or be worked across them—but they should do one or the other, and not hesitate between the two courses. Worked in the direction of the drawing they are extremely helpful to it, explaining the form in a way possible only in handwork. That is the best of reasons for working in the direction of the pattern. For it is plainly expedient for the most part to do with the needle what the loom



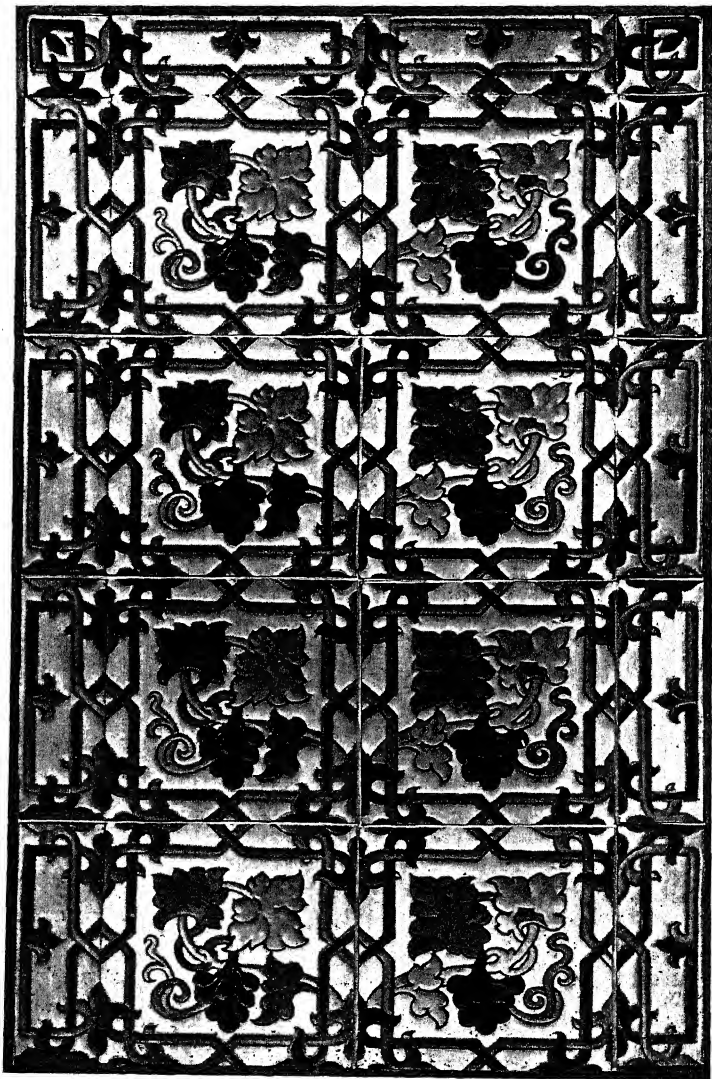
49. MORESQUE PATCHWORK OR MOSAIC OF GLAZED EARTHENWARE.

cannot—not, for example, repeated pattern laboriously even in tint, but free-growing design, in stitches taking their direction from the design, and modified in colour according as they catch the light.

The preciousness of embroidery has been rightly insisted upon. It is superadded, and should be worth adding. But, though there is scope for work by no means ambitious or pretentious, the simplest needlework takes so much time to do that there is no excuse for shirking the labour of its design.



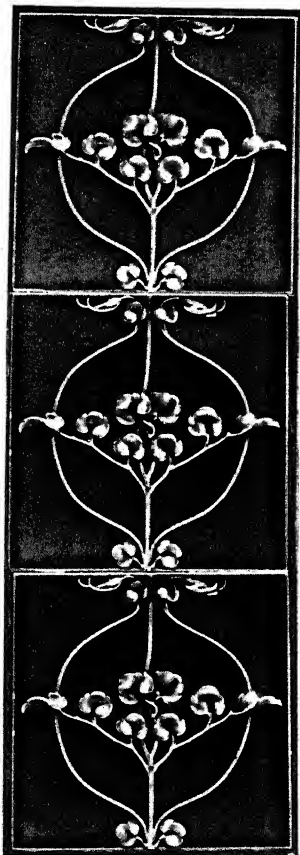
50. SARACENIC INLAY OF MARBLE INTO STEATITE.



51. TILES DECORATED IN COLOURED GLAZES SEPARATED BY
A RAISED OUTLINE.

In the more boldly effective embroidery the pattern is not worked in stitches, but sewn on, a fretwork, as will be seen (page 219), of silk upon velvet, or what not, outlined either by stitches, sewing it down, or by couched cord masking the joint (47). The relation of this to the rose point lace on page 57 is evident; and that, too, has a firm raised outline or "cordonnet," necessary in this case to strengthen it.

The designer for tile-work is confronted by a difficulty peculiar to the size and shape of tiles. It is not that he has to design a repeat to the dimensions of a six or eight inch tile—he may spread his pattern over a number of such tiles (restricted only by the cost of so doing in the case of manufacture)—but that he must observe the lines of the jointing. At times he will find it to his purpose to accentuate the square lines; at times it will be advisable to divert attention from them—which is only done by very carefully considering them. Any design may, of course, be cut up into small squares; but it is only by a miracle that hap-hazard lines could help interfering awkwardly with those of the design. The designer, therefore, scores his paper across, and, with the joints thus marked out for his guidance, avoids forms

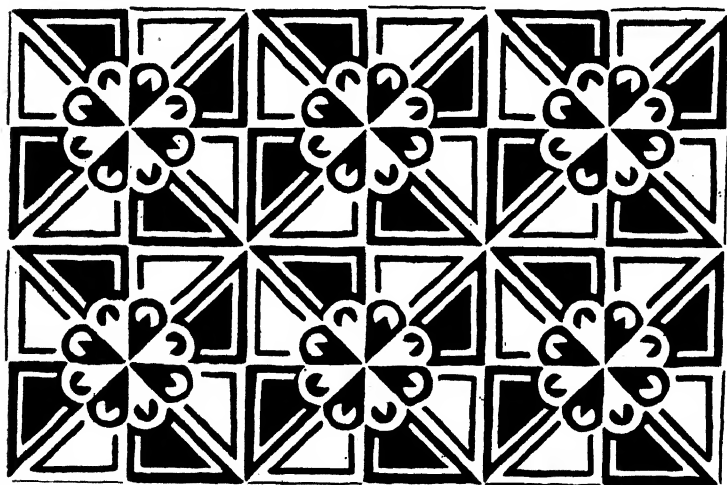


52. MODELLED TILES, IN WHICH THE GLAZE COLOUR SHOWS LIGHTER AND DARKER ACCORDING TO ITS DEPTH.

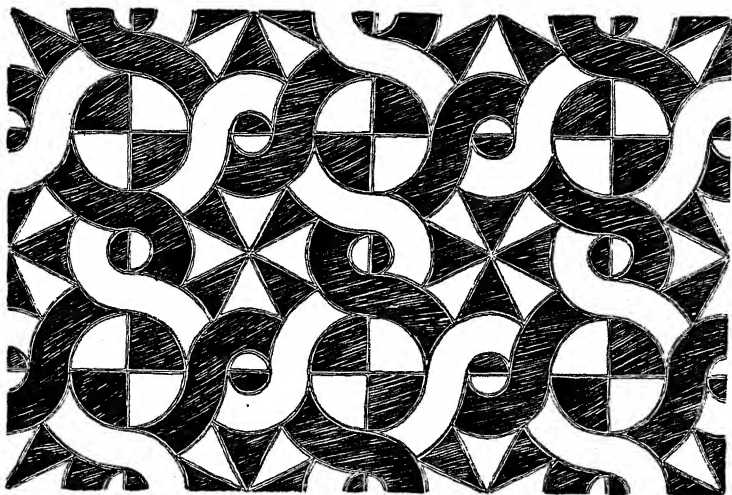
with which they will conflict. The joints must somewhere cut across a continuous pattern: he contrives that in so doing there shall be the least possible danger of their distorting or disturbing it. It has to be remembered that tiles will shrink in the fire, not always equally, and that perfectly fitting lines are not to be reckoned on.

In the same way the Assyrian of old (1) evidently scratched the jointing of his bricks on the "unbaked" clay, modelled his design with careful regard to them—look how the lion's head is placed in relation to them—and then cut up his slab into bricks, afterwards baking and enamelling them.

The raised outline, perceptible in the ornament, was, there is no doubt, necessary in his case to prevent the coloured enamel from running beyond its allotted compartment—a cloison in fact (see Chapter X.). This was equally the case with the Spanish tile maker, who arrived out of his own experience at the same means of keeping his coloured glazes within

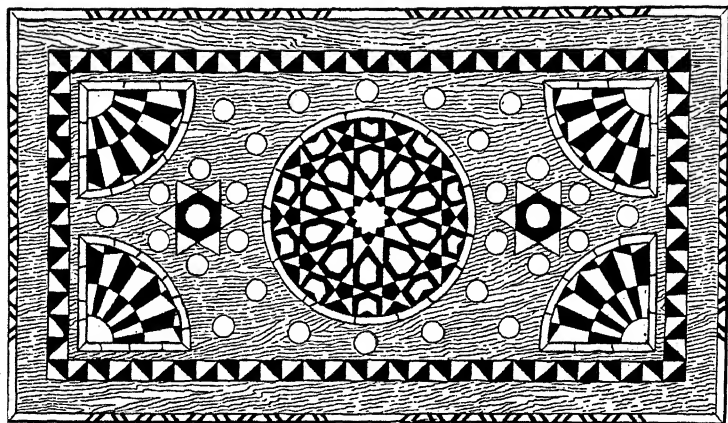


53. COUNTERCHANGE PATTERN IN WHICH PATCHWORK AND INLAY ARE USED IN COMBINATION.



54. THIRTEENTH CENTURY PATCHWORK OF LIGHT AND DARK MARBLE COUNTERCHANGING.

bounds. He began by laboriously cutting up glazed tiles into little pieces and fitting them together mosaic-wise. He did, in fact, in glazed earthenware (49) very much what the marble worker did in his inlay (50), except that he had not a solid slab into which to set his pieces, but had to build up his design entirely out of small pieces of tile. And this he did because he had no other means of sufficiently controlling the flow or his enamels or glazes in the fire. When it occurred to him that by digging shallow cells into the clay he could get little party-walls between his colours, which would prevent their running together, he proceeded at once to do in square tiles what before he had done in mosaic, reproducing at first the very same patterns. Once familiar with the method, he was inspired by it to do work in which no trace of geometric pattern is to be found (2). In the modern tiles (51), designed on the principle of the raised outline, the ground has been sunk unequally so as to give, not modelling, but variety

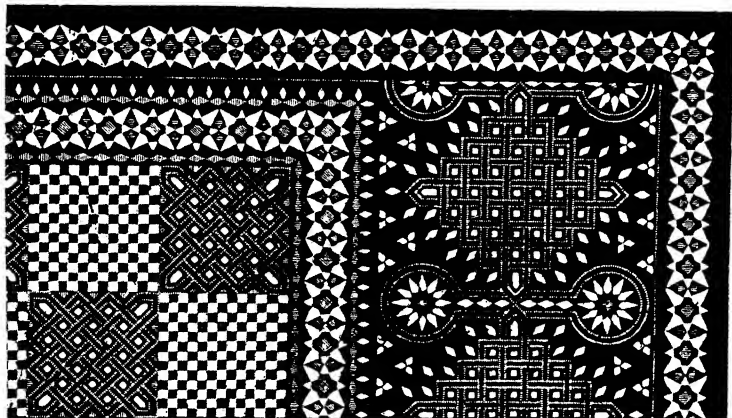


55. ORIENTAL INLAY INCLUDING PATCHWORK.

in the transparent glaze, according to its depth. (Compare "*basse taille*" enamel, page 200.)

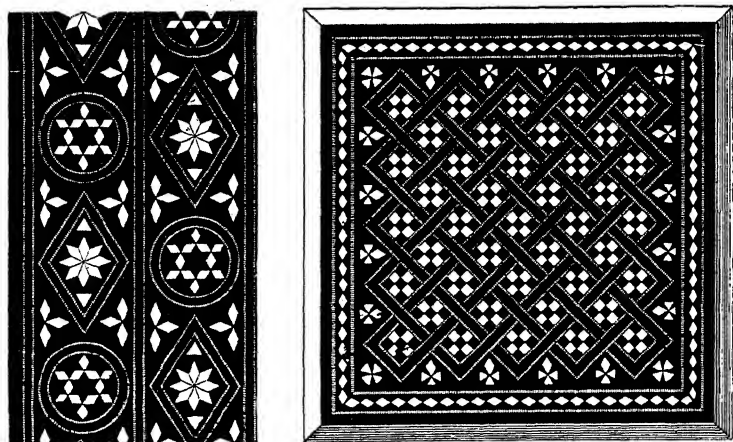
The flowing of the glaze on a modelled tile (52), so that the colour shows lighter or darker according as the surface is in high relief or deep sunk, affects the spacing as well as the modelling of the design. If the raised edges are too sharp they will shoot off the colour and stare out white and startling. If the hollows are too deep, or there is no outlet from them, the colour will be so dense as to show no gradation at all. On the other hand, a modeller familiar with the process can, if he wishes it (let us hope he does not), produce an intaglio, which, when it is glazed, will have the effect of monochrome painting. What he in any case has to do is to realise the depth of colour which will result from a given relief in the modelling upon the ground or a given depression in it.

The difference between inlaid and mosaic pattern, between, that is to say, a ground into which a pattern is inlaid and a patchwork of separate pieces, is illustrated in the panel above (55).



56. ITALIAN INLAY MORE OR LESS MECHANICALLY DONE.

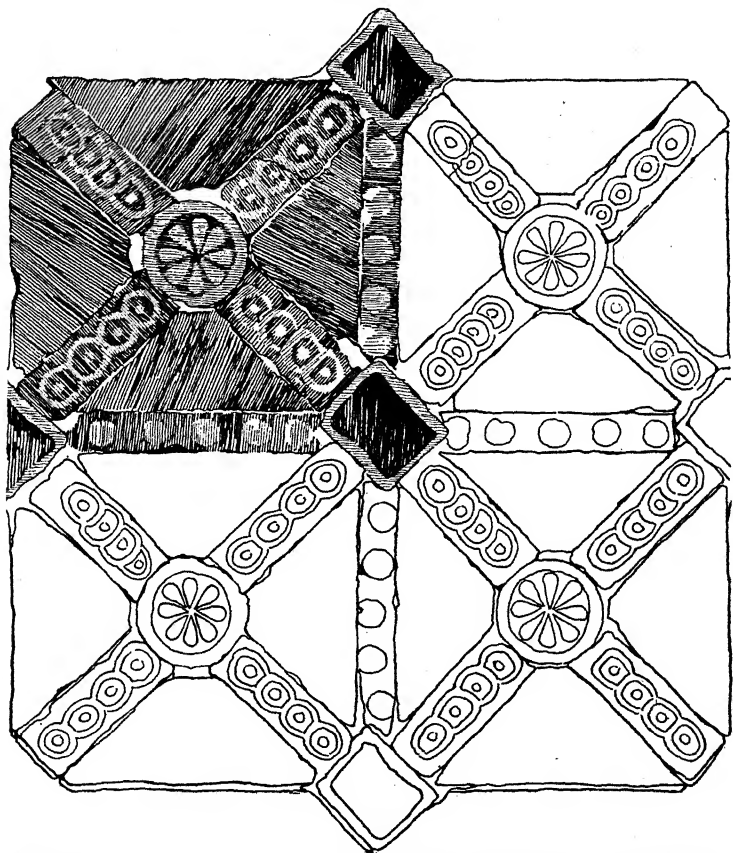
A patchwork of only two colours is of itself enough to account for the origin of "counterchange," no matter whether or not it did actually arise in that way. It is quite certain that patchwork leads, as it seems infallibly, to a kind of design very different from that natural and appropriate to inlay (see pages 223-4). The perfect design from the Baptistery at Florence (54) could not possibly, for example, be stencilled (see again page 224); the inlaid patterns from the same floor (221) might well be. Still the two processes are constantly overlapping. The counterchange design on page 62 is a mosaic into which lines and eyes of the contrasting colour are inlaid. Again, the wood panel on page 64 is inlaid with patchwork of ivory and ebony: the central rosette, the fans in the corners, and the inner border are first built up of little pieces and then put into their place. The geometric patternwork introduced in this way into Italian intarsia was actually the outcome of a process existent to this day in what is known as "Tonbridge ware." Long rods of wood of various colours are glued together (alternate rods of black and white give a



57. ITALIAN INLAY MORE OR LESS MECHANICALLY DONE.

chequer), and the mass has only to be cut in slices across to give thin slabs of diaper, which the marquetry worker uses as if they were pieces of simple veneer. The Italian work of the fifteenth and sixteenth centuries shows by contrast what very poor use we make of this practical device. The trick is so easily done that it is almost invariably overdone; but there is no valid reason except our want of self-restraint why we should not take real advantage of it. A practice of this kind was carried to extraordinary perfection in Egyptian or Græco-Egyptian art. Not only did the glass worker put together rods of glass in this way, and melt them together in the furnace; but, having made the compound rod red-hot, he drew it out to great length, thereby considerably reducing its circumference, so that, when this was cut into slices, the section appeared to be made up of the minutest tesserae, like the miniature mosaic made in Rome for brooches and other trinketry. A slice of glass produced in this way would show of course on the under side of it the reverse or turn-over of the design; and the glass

workers of old were cunning enough to avail themselves of such an opportunity of saving labour. They went even to the length of making one half of a design do duty in this



58. MOSAIC OF GLASS MORE OR LESS MECHANICALLY PATTERNED.

way for the two sides of a face—a questionable expedient, which may pass on the minute scale of the actual picture, though the line where the two halves are joined up may always be detected.

The fragment of tile-like pavement on page 67 is put together in pieces of glass, some of which are inlaid with pattern, not built up of rectangular rods as above described, but worked in the molten state of the glass, more after the fashion of particoloured sugarsticks. The pateræ and other patterns are sections of such sticks of glass.

A different development of very much the same idea is shown in the "marbled" cup below, in which flat ribbons of white glass have been embedded in blue, the whole fused



59. VENETIAN CUP CUT OUT OF A CONGLOMERATE OF BLUE AND WHITE GLASS.

into a solid lump, and the cup carved out of it as if it had been agate or some other precious stone. It is, in fact, the combined work of glass worker and lapidary.

A much ruder but somewhat similar effect was more simply got in English earthenware by agglomerating shreds of different coloured clays, and working them together until a section of the solid lump gave very much the appearance of marbling—sufficient, when enhanced by a harmonising glaze of transparent colour, to justify the description of "agate-ware."

The range of surface design and the influence exerted on it by practical conditions is so wide that the attempt to cover it here would be absurd. Enough, it is to be hoped, has been said to show how much designers lose who confine their attention to the one sort of work for which they happen to design. The design of men working in a direction apparently quite unrelated to their own may yet be a most fruitful source of inspiration. Not only is it likely to be suggestive, but they may freely draw from it. For, in the very act of translating a borrowed notion into the terms of his own craft, an artist of any personality will go far to make it his own. "Translators, traitors," says the proverb, truly. Here, by way of wonder, is an occasion when treachery is a virtue.

V. THE TEACHING OF THE TOOL.

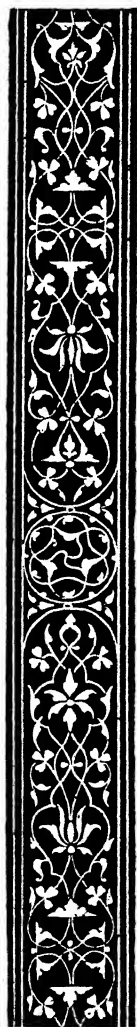
Treatment and style are as cause and effect—The character which comes of workmanship—All processes influence work done—Material and tool determine character—Examples : pottery, weaving, basket-work—Forms evolved out of the way of working—"Linenfold" panelling and its relation to the moulding plane—Bookbinders' tools and their influence upon design—Drawn and cut work, and in what its design differs from that of pillow-lace—The designer and his material—Conventions accounted for—Architectural proportions—Clay and its character—Metal and its characteristics—Carving in wood and stone, and in various kinds of wood and stone, in ivory, in crystal—The influence of the knife upon carving design, of the chisel, of the drill—Cut leather—Quilting—Repoussé metal—Modelling in clay, slip and gesso—Cut glass and blown glass forms—Opus Alexandrinum, geometric mosaic in glass and wood, Arab lattice-work.

STYLE and treatment are as effect and its cause. Historic ornament, as we call it, is less a matter of time and country than of the methods of workmanship then and there practised. We see in it the sequence of design. Its course, however, is not quite so clear-cut and direct as might be gathered from the fluent accounts that have been given of it. Who shall trace it for us in all its deviations? Where is the artist equipped with the necessary scientific knowledge? where the man of learning susceptible enough to the charm of art? Scientific investigators err from want of artistic appreciation, artistic observers from want of historic data to go upon.

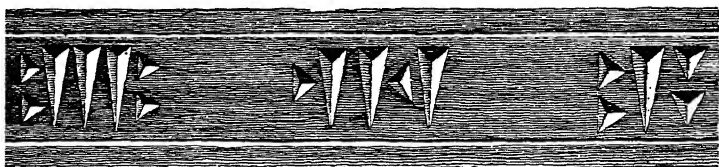
Too much stress has been laid upon the Egyptian, Assyrian, Greek, Roman, Byzantine, Gothic, Renaissance

style of ornament, and not enough upon the character which comes of its workmanship. That was influenced, of course, by the progressive course of civilisation and culture, by the transmission of ideas and the adoption of traditional devices; but it was inherently the outcome of treating ornament according to its kind; of applying it to the case in point, of adapting design, not to wood or metal merely, but to some particular kind of wood or metal; and, further, to the way of working, the one with saw or plane, with gouge or on the lathe, the other with graver or with punch or on the blacksmith's anvil; it was the result of regarding pattern as applied not simply to weaving, or to weaving in silk only, but to damask, velvet or brocade.

Studies in the direction of the essential character of design will, it is true, lead the student of ornament to the consideration of racial, national, and local characteristics; but this is rather by the way. His point of view is the very opposite to that of the historian. He is keen to see the mark left upon historic ornament by the mode of workmanship employed at the time, to trace the evolution of technique and its sure influence upon design. The historian is interested in ornament because of the light it throws upon the life of folk in times past; the ornamentist is interested in history because of the light thrown by the course of events upon the development of ornament, explaining to him, for example, the Eastern character of Italian inlay, such as that here given, by the close intercourse between Venice, the port of the Medi-



60. ITALIAN
SIXTEENTH
CENTURY INLAY
INSPIRED BY
ARAB WORK.



61. CUNEIFORM INSCRIPTION, B.C. 820.

terranean, and the other side of the water, in the sixteenth century.

Style, therefore, must not be taken to mean only the traditional or historic character of ornament as influenced by time and place and race. Were it wholly a question of the development of a people, that, in turn, is bound up with the conditions of workmanship current among them. As a matter of fact, what we recognise as traditional style in ornament is to a great extent evolved from methods of workmanship; and the character which comes of workmanlike use of material and tools is really what artists, as distinct from archæologists, call style—characteristic and expressive *treatment*, that is to say.

Style in this sense is inseparable from material and



62. JAPANESE BRUSH WRITING.

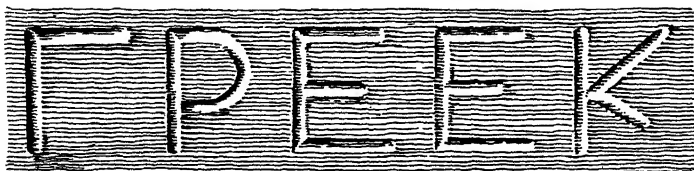
workmanship; it is analogous, as Mr Wornum long ago pointed out, to "hand" in writing. But handwriting is determined not only by the personality of the writer but by the pen he uses. There never was a process but wrote its character upon the work done by it; and the tools of the writer have always left their mark upon his writing.



63. INCISED MÆDIEVAL STONEWARE.

The cuneiform character of the Assyrians (61) (curiously like the dig of the Rhenish potter upon his clay (63), though he never heard of the writing on Babylonian slabs and cylinders) tells of the chisel with which it was cut; the flowing lines of Chinese and Japanese characters (62) proclaim the brush.

The lettering overleaf tells a tale there is no mistaking. The blunt Greek letters are plainly indented in some



UNCIAL LETTERS

LOMBARD

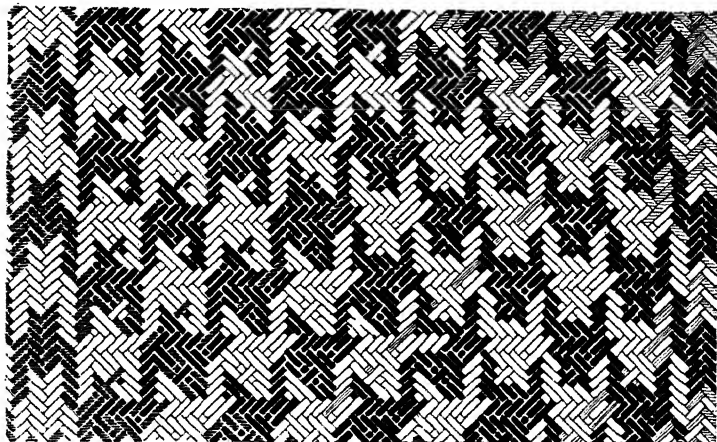
lower case

italics round

german gothic

64. TYPES OF LETTERING DETERMINED BY THE IMPLEMENT
USED IN WRITING.

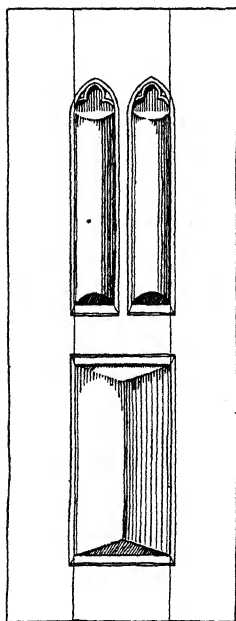
soft material with a not very sharply pointed stylus, the acutely spurred Roman cut in a hard one with a chisel; the uncial letters, with their thick and thin strokes, tell not merely of the pen but of the varying pressure upon it; the Lombard capitals are clearly penwork, too, though not done with one stroke of the quill, except in the thin strokes, in which sometimes, as in the tail of the R, it runs away with its driver. The relation of printers' "lower case"



65. AFRICAN BASKET-WORK CHARACTERISTICALLY PLAITING.

to the penwork from which it is derived is not difficult to trace when we compare it with the well-shaped italics of which our ordinary round-hand is a crude and clumsy version. But it is perhaps in German Gothic, whether of the angular or the more flowing type (both given at the bottom of the page) that the penmanship is most unmistakable.

That printed type does not more distinctly tell of the intervention of the type-founder, may be attributed to the fact, that the aim of printing was to imitate manuscript, if

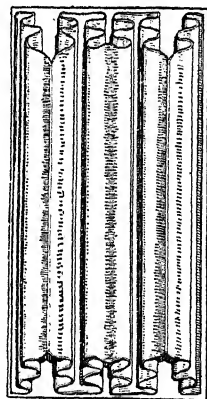


66. DOOR PANELS ON THE WAY TO "LINEN-FOLD."

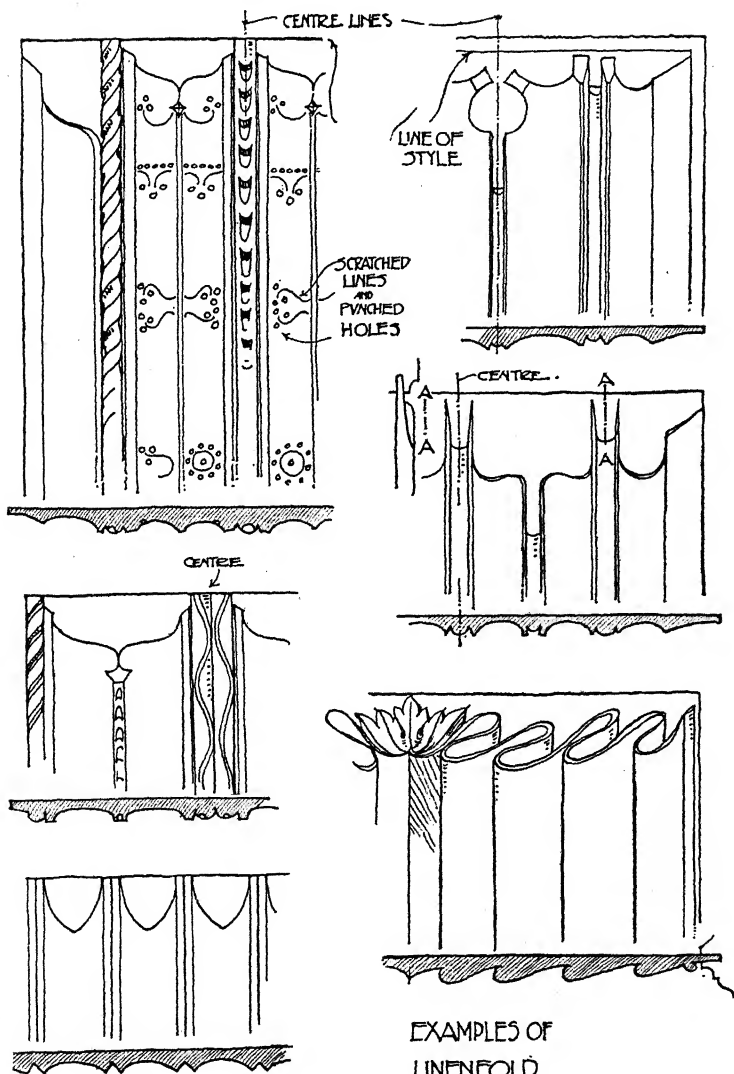
cal teachers. Perhaps our most efficient technical teachers are the tools we use. We are accustomed to trace a traditional form of ornament back to Greece or Egypt, and to think we have discovered its origin; we should find most likely, if we could go back further still, that, even though at the root of it there were symbolism, its development was due in considerable part to the use of some particular material or the employment of a particular tool—in short to technique. It takes perhaps

not actually to pass itself off for written. A genuine artistic impulse on the part of the printer would certainly have led him so to modify the character of script that there was no mistaking his handiwork for it. With regard to modern script, we are in far too violent a hurry nowadays to indulge, except in our signature, in the ornamental flourishes of the scribes of a more leisurely period; but our scribbling has, nevertheless, the character of quill or steel nib, stylographic or fountain pen—whichever it may be. And as it is with the pen of the writer, so it is with every tool a man uses.

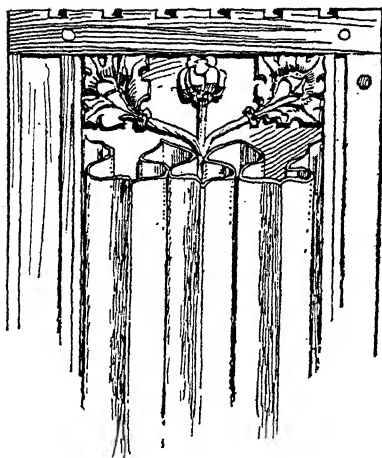
There is a great deal of talk just now about technical education, and of the need (urgent enough) of techni-



67. GOTHIC "LINEN-FOLD" PANEL.



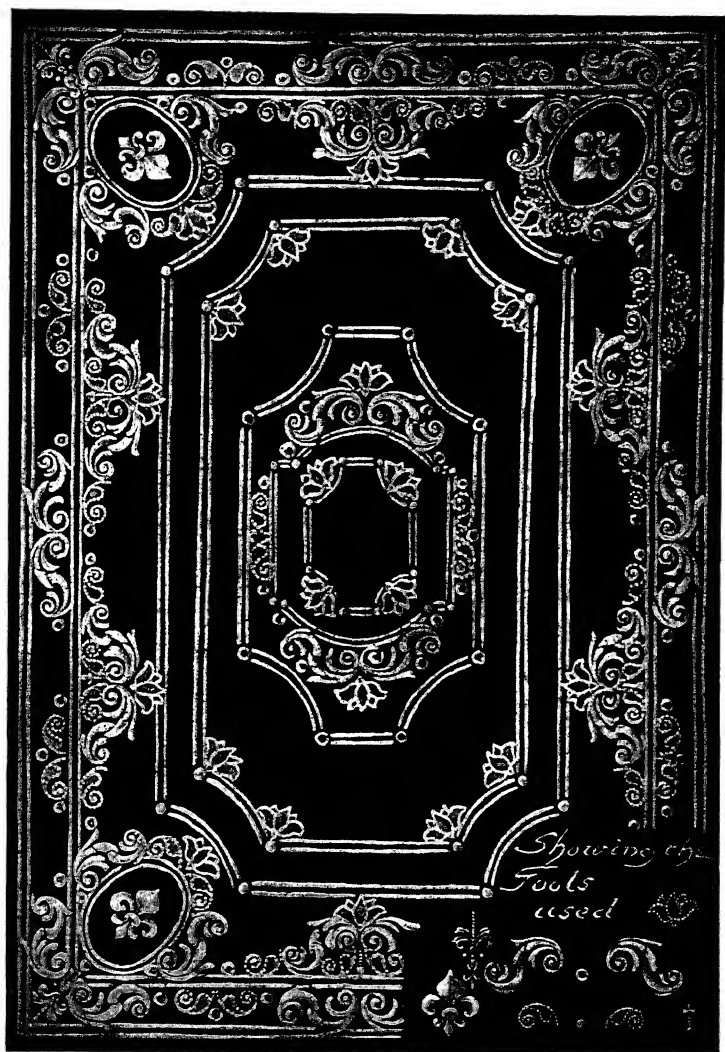
EXAMPLES OF
LINENFOLD
PANELS



69. "LINENFOLD" WITH ADDED FOLIAGE.

a workman to perceive everywhere this influence of "treatment" upon ornamental design, still more to appreciate its effect upon time-honoured "historic" forms; but no thoughtful workman will doubt the fact. It jumps to eyes that have been trained to see. And it could not be otherwise—as experiment will surely prove. Take any tool in hand and proceed to design—and see what comes of it. The result will be not at all what you would have

drawn on paper. It will be something much less literally like any natural object which may have inspired it; and the difference will be according to the tool with which, and the substance in which, you are working. They will, in fact, largely determine your treatment of form, and, consequently, the character of your design. Pattern happens, as it were, inevitably. The potter "throws" a lump of plastic clay upon his wheel, and, as it revolves and he draws up the vessel into shape, his fingers furrow it with rings, perhaps pleasing enough to be left as ornament, but in any case, more the result of accidental pressure than of deliberate intention on his part. It is the same in other simple crafts. The primitive weaver did not set out to produce the stripes continually recurring in his work: he had only to take up in succession, shuttles of differently coloured wool, and they gave him stripes. The basket-maker, with no thought of pattern, had only to plait straws



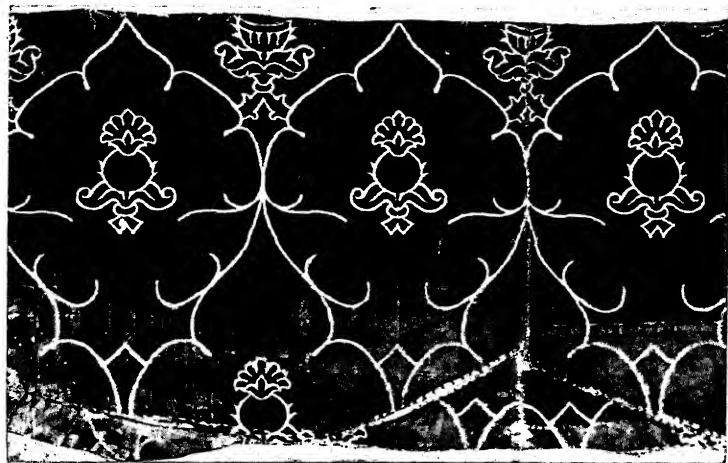
70. TOOLED BOOKBINDING AND THE DETAILS OF WHICH THE DESIGN IS MADE UP.

of two different tints and he had a checquer. And to the end of his plaiting, whatever the elaboration of his design (65), and whatever the symbolic significance of it (ethnologists tell us it is all imitation; but then they do not appreciate the ornamental instinct of the savage), it has a character there is no mistaking for anything but basket-work—any more than tartans can be mistaken for anything but the sure result of the crossing lines of warp and weft arranged in bands of different colours.

In work, also, no longer primitive, material may be trusted to advise the designer what to do, and his tools to tell him how to do it—so surely that to explain the treatment characteristic of the various periods of historic ornament would be to tell the story of the various crafts practised. All that is possible to do here, is to give typical instances of the influence material, tools, and processes of execution, have had upon design. Not one of them but



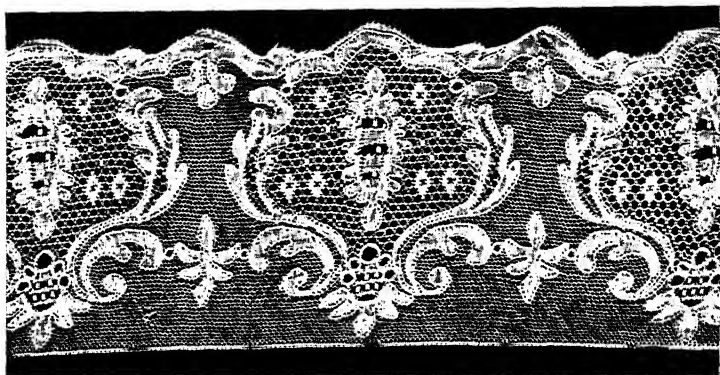
71 AND 72. SEVERE DESIGNS, NOT HARSH, IN GENTLY CONTRASTING SHADES OF DAMASK.



73. DESIGN DISTURBING THE LEAST POSSIBLE SURFACE OF
VELVET PILE.

will support the contention, that design has always and inevitably been, if not in the first place due to treatment, eventually determined by it.

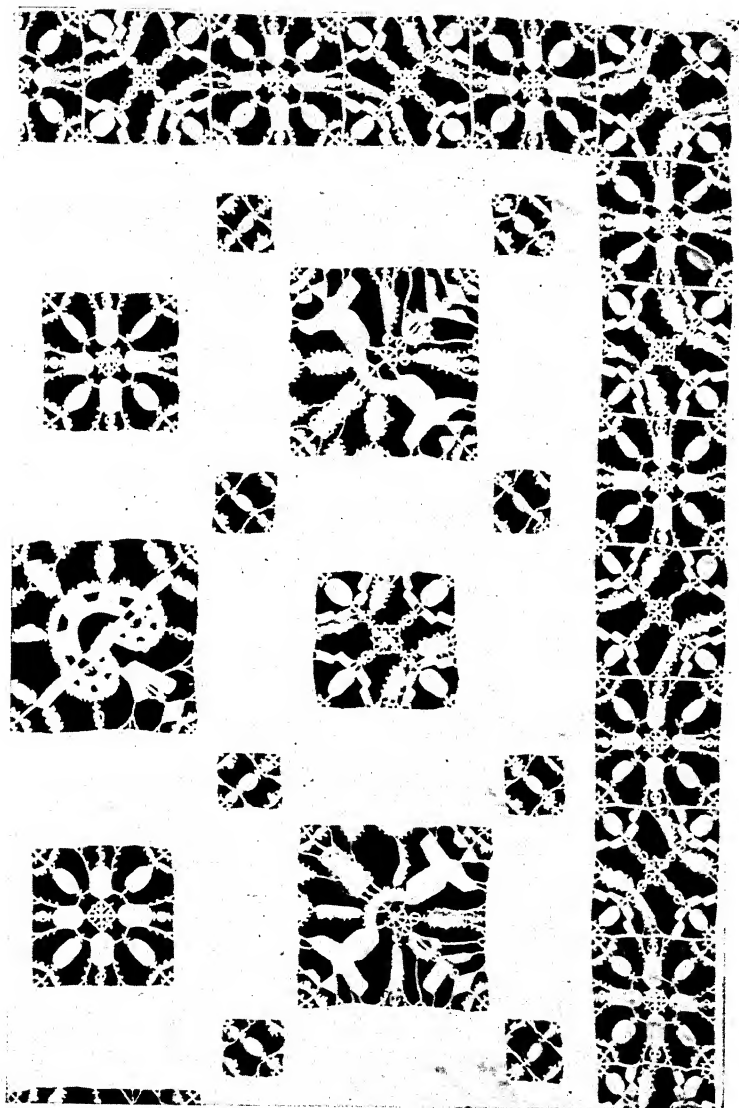
It is much too readily assumed that imitation is the beginning of all ornament. The resemblance of ornamental to natural form is often only an after-thought. The designer evolves out of his way of working forms more or less like something familiar to him, and proceeds *then* to make the likeness as near as may be to it. A case in point is the well-known Gothic panel enrichment which goes by the name of linenfold—contemptible enough as the imitation in wood-carving of a folded napkin. But it is not in the first instance imitative at all. Nor, as it happens, is it wood-carving—but the work of the joiner's plane; and, more than that, it is the direct result of his endeavour to get sufficient play of surface on his panels to distinguish them from the flat stiles. Nothing is easier



74. LOOSE FORMS OF BOBBIN LACE.

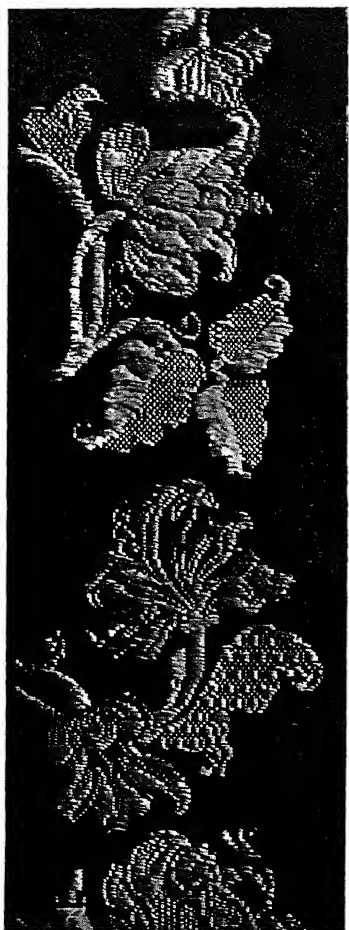
for him than with a moulding plane to plough along his plank until the surface is all in ridges, and then cut it up into lengths according to the requirements of his panelling. The difficulty occurs when it comes to framing them up. The ridges must needs be shaved down at the ends to an even surface which will fit into the rebate.

In the little door from the church at Toul illustrated on page 76 (which may be regarded as a step on the verge almost of linenfold) the carpenter has just bevelled the ends of the plank in a way which plainly shows its curved or angular section. The sloping section of a waved panel might not be so satisfactory; but, as the carver soon found, there was no occasion to leave it in that state; it wanted only a very little carving to reduce what might be an ugly line to a graceful one. In reducing his section to something like ornament he arrived very soon, but not (see page 77) invariably, at something like the overlapping edges of a folded cloth (67). The notion appears to have caught the fancy of the day, and he worked it for more than it was worth. Happily his representation of the napkin was at the best fantastic enough to foil to some extent his



75. SQUARE FORMS OF CUT LINEN.

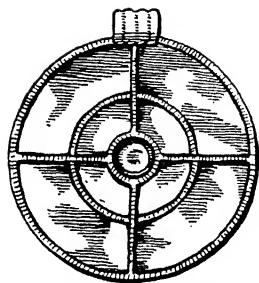
imitative intention. But the more he thought about grace and interest of line, and the less about linen and its folds, the better. As a simple means of surface enrichment, for



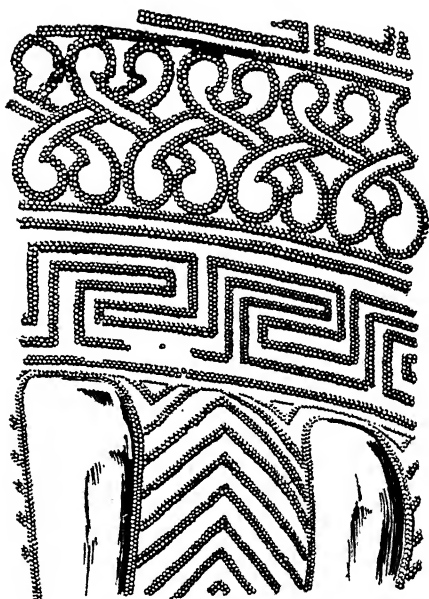
76. SURFACE SILK BOUND DOWN
IN SQUARE-LINED PATTERNS
NATURAL TO WEAVING.

the most part easily done with a moulding plane, and only calling for the finishing touch of a not very expert carver, this idea of simple semi-mechanical surface enrichment (as distinguished from the imitative form it happened to take) is worth, perhaps, more consideration at the hands of a generation priding itself upon its practicality than it has received.

Another and more popular form of decoration, in which the mechanism of the method has a great deal to say as to the design, is book-binder's tooling. The ingenious and beautiful book-cover designs of the Henri II. and other periods, specimens of which are given on pages 176, 228, and 306, bear on the face of them evidence of the way they were built up. The lines do not flow freely but are compounded of short curves given by "gouges" and of details impressed by a comparatively small number of tools which the "finisher"



77. ONLAID WIRE.

78.
ORNAMENT BEATEN UP.79. PATTERN IN BEADS OF GOLD
SOLDERED ON.

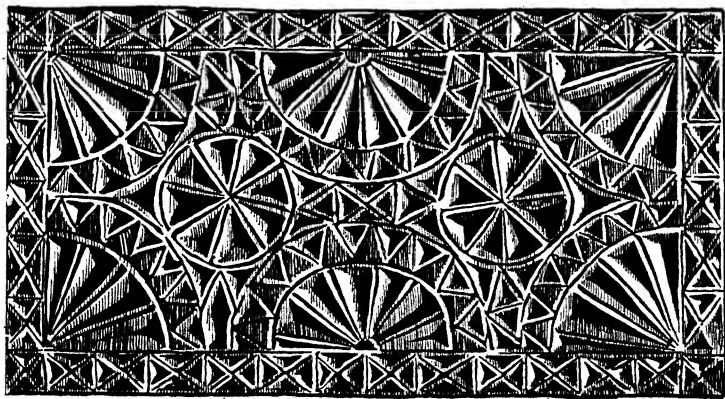
could dispose and turn about as he pleased. The Louis XIII. cover on page 79 is a very simple one, chosen on that account to show the different uses to which the same tools may be put (there are very few of them, it will be seen); but even in the richest and most luxurious examples of a better period the absence of growth in the line tells of the tool. The remarkable thing is how well the great binders of the sixteenth century did without that freedom of line which we are apt to consider indispensable. They did not, as the modern custom is, seek safety in mere diaper work, but, accepting rather mechanical curves as a necessity of the case, produced with them designs in which the mechanism, apparent as it is to the expert, is not so much as suspected by some admirers of old bindings.



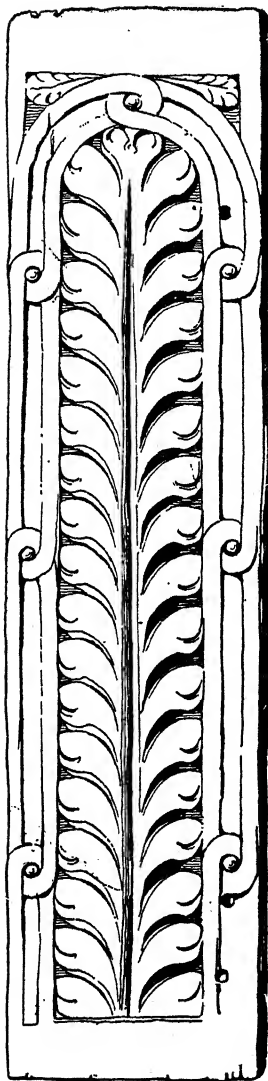
80. ETRUSCAN CUP, OF WHICH DETAIL IS GIVEN ON PAGE 85.

It has been shown already at some length in a volume more or less preliminary to this ("Pattern Design") how the very construction of pattern may be affected by, if not entirely due to, some particular method of work, and the conditions arising out of it. Much more is that so with its detail. The broad masses of an old silk damask or other textile, in which the quality of the material is all in all, are planned to give it value. Patterns which in black and white (71 and 72) would be harsher than is pleasant, are just the thing to give effect to the gentle contrast between the two shades of a colour which result from a difference of woven texture. The thin and rather wiry line, which is so characteristic of the velvet patterns of the fifteenth century (73), is designed to disturb as little as possible the surface of the sumptuous pile.

Contrast, again (74 and 75), the looser and more indeterminate forms of pillow-lace, in which net and ornament are alike the work of the bobbins, with the severer forms belonging (as was shown on page 52) to cut-work and other forms of lace in which the threads are drawn. It will be seen that the square lines of the warp and weft survive always in cut-work (75 and 43) to remind one of the way it was done. In the same way the minute diapering of the surface of leaves and flowers in old brocades of the seventeenth and eighteenth centuries (76) is a device inspired by the very practical consideration of securely binding down loose floats of silk, and their rectangular character is the natural result of the square mesh given by the loom. So, to the end of the long chapter of design, ornament grows out of conditions of work, and the character resulting tells of them. Unintelligent use of ornament is the result of not consulting the conditions inherent in the thing to be done. Material and process may be trusted to suggest the character of ornament. Let the designer take their hint, and have always clearly in his mind the conditions under which his design has to be carried



81. CHIP CARVING—KNIFE WORK.



82. FRENCH GOUGE
WORK.

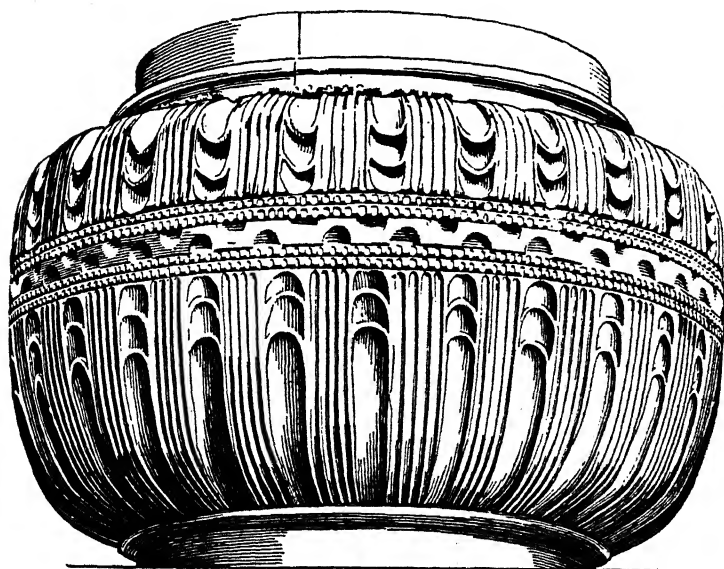
out, as clearly as though he were himself working under them.

There are theorists who will tell him that the designer should carry out his own designs always, and the workman design whatever he does. Happily that is not essential, for practical men know that it is not under modern conditions possible.

The condition on which a man may be trusted to design adequately is, that he shall know all about his material and the way it is to be worked, that he shall appreciate the treatment proper to his material, realise what can be done with it, what can best be done with it, and what cannot be done with it at all. He is in a position then to decide upon the form and colour of his design. Technique will have something to say on both points. What is under the circumstances of the case the simplest and most natural to do, will commonly be, not only the safest course, but the one most directly conducive to success. And the directness of downright design has always a charm of its own.

When first our attention turns to design we wonder why handicraft goes on in certain lines.

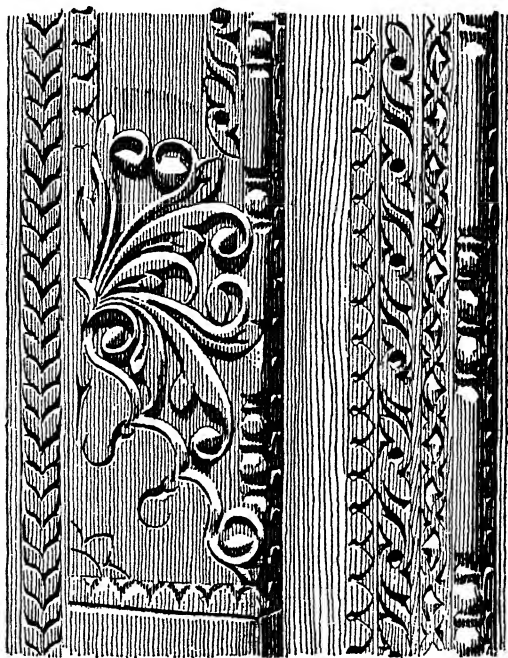
Why did the artist do *this*? Why didn't he do *that*? He has got into the ruts of tradition, we conclude. That is to some extent so; but it is too readily assumed that tradition is amiss. There is usually some very good technical reason for a prevailing practice. Traditions may, no doubt, be too



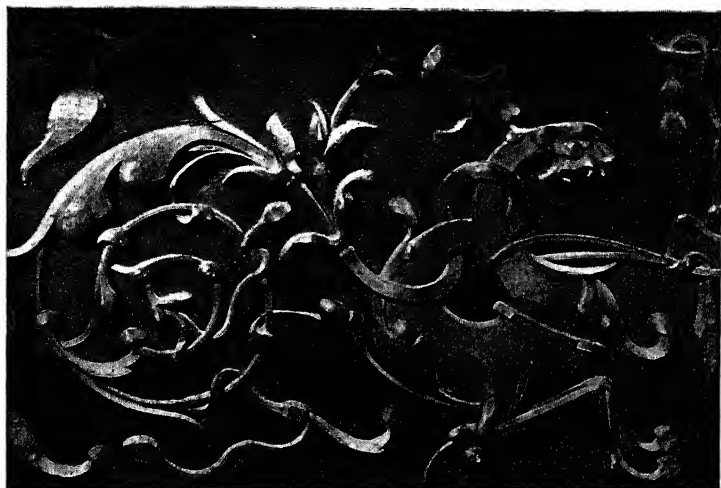
83. ITALIAN GOUGE WORK.

narrow; they may be outworn; but they are the outcome of technique; and it is to technique that the designer must look to point out the path to him. The way of technique is the straight way to success. Other ways are relatively roundabout; if ever they lead there at all, there is waste of energy at least in following them. The easiest thing to do may not be the best worth doing; but we have always to ask ourselves, was it worth while? and in every art or handicraft there is much which, possible though it may be, is clearly not worth our pains.

Hence the direction which design has taken. A workman reckons up what can be done, and at what cost. He sets himself to do what can be done at a cost of labour at which it is worth while doing it. He follows for a while at least the beaten track; and it leads him further on his way than he could have gone over untrodden ground. For the track is marked out by conditions it would be simply foolish to disobey. In every difficulty the designer turns for help to the conditions. The first hint of form or colour, the encouragement to dare, no less than the caution to beware, come to him from the conditions. They are his signposts all along the road. There is possibly *no* characteristic form of design which has not eventually been shaped, if



84. DIRECT AND SIMPLE INDIAN WOOD CARVING.



85. CHARACTERISTICALLY WOODEN TREATMENT OF ARABESQUE.

it was not originally suggested, by conditions—conditions of place and purpose, of material and the means of working it. The familiar forms of architecture, for example, to whatever perfection of proportion they may have been brought, whatever of symbolism or sentiment may have modified them, beautiful as they may be, or tiresome, all grew out of use. And, though eventually we come to accept them as features of “style,” the very proportions of an architectural “order” cannot be called independent of mechanical considerations.

When we come to detail more or less significant, it is no merely artistic impulse which suggests that the sharp edges of overlapping stones should be rounded off until we get something like mouldings; that the lower wall of a room should be furnished with wainscoting, leaving a frieze space above; that the height of a dado should correspond with that of the chairs set back against it.



86. THE CHARACTER OF THE MATERIAL PRESERVED IN FINISHED WOOD CARVING.

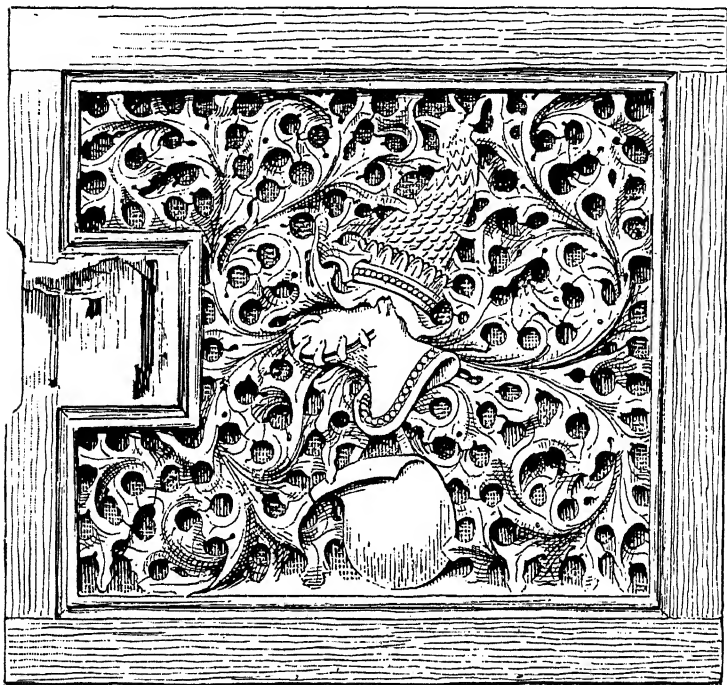


87. CHARACTERISTIC WOOD CARVING.

The style of architecture depends, too, upon the stone, brick, timber, plaster, concrete, iron, or whatever may be used in the building of it. So, again, the character of a vessel is affected by the material, wood, clay, metal, or whatever it may be, of which it is made. Nor is it merely with wood, clay, or metal, that a designer has to reckon, but with particular kinds of wood, clay, or metal—each of which has qualities and defects peculiar to it. A potter has to determine whether he shall “cast” his vessel while the clay is liquid, or throw it on the wheel whilst it is still plastic, and whether he shall finish it on the lathe; and the expediency of one process or the other depends upon the fine porcelain, the stiff stoneware, or close-grained earthenware with which he has to deal—upon the nature of the clay, in short.

Then there is the question of the after-decoration of the ware. Shall he build up his ornament upon it in wet clay, or scratch into it? shall he dip it into colour, or paint it?

shall he leave it in the biscuit state, or glaze it? And suppose it is to be painted, shall the colour be put on to the ware before it is glazed, or after? or shall it be in the glaze itself? and in the latter case, how had he best keep



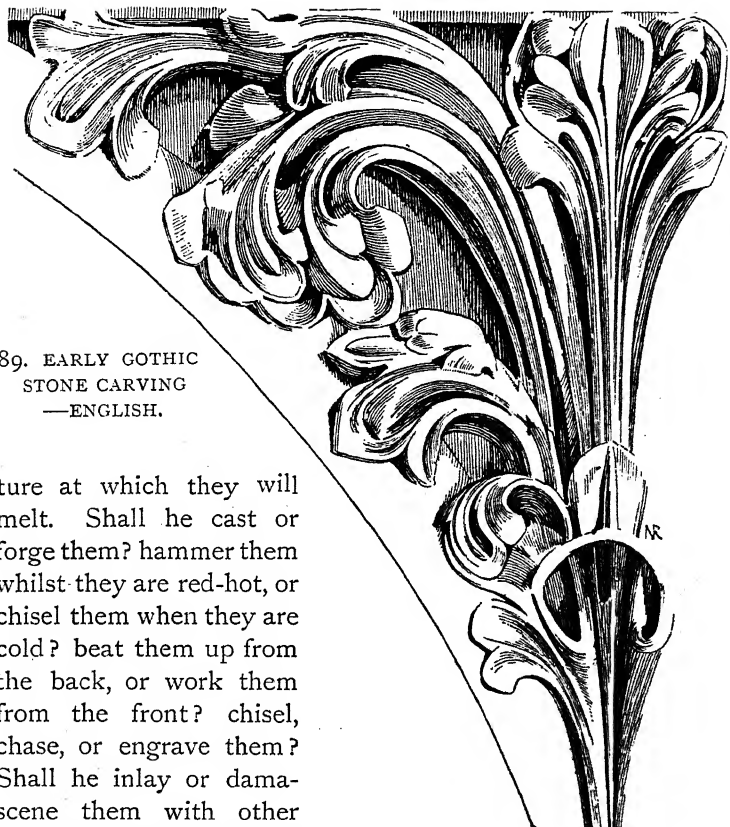
88. WOOD CARVING IN WHICH THE USE OF THE DRILL IS APPARENT.

his colours apart? These are only some of the conditions with which the designer for pottery has to do.

Again, we talk of the metals as base or precious. But the designer has to regard them from another point of view also—according to their ductility, the ease with which they can be beaten into shape; and their fusibility, the tempera-

89. EARLY GOTHIC
STONE CARVING
—ENGLISH.

ture at which they will melt. Shall he cast or forge them? hammer them whilst they are red-hot, or chisel them when they are cold? beat them up from the back, or work them from the front? chisel, chase, or engrave them? Shall he inlay or damascene them with other metal, enamel or bejewel



90. LATE GOTHIC WOOD CARVING—ENGLISH.

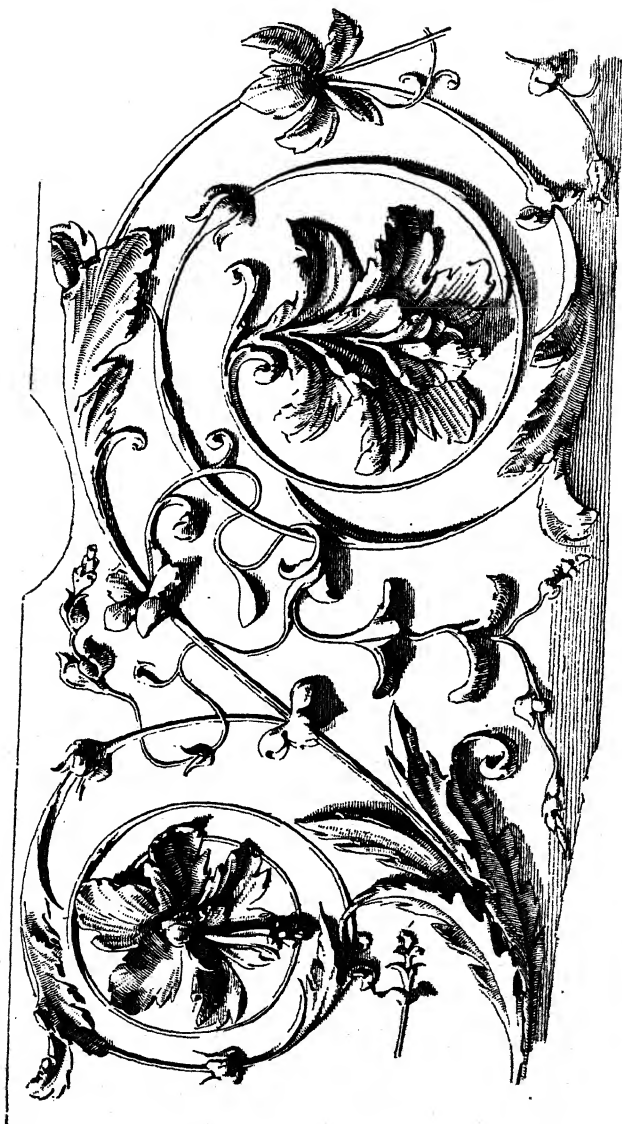


91. FRENCH ROMANESQUE STONE CARVING.

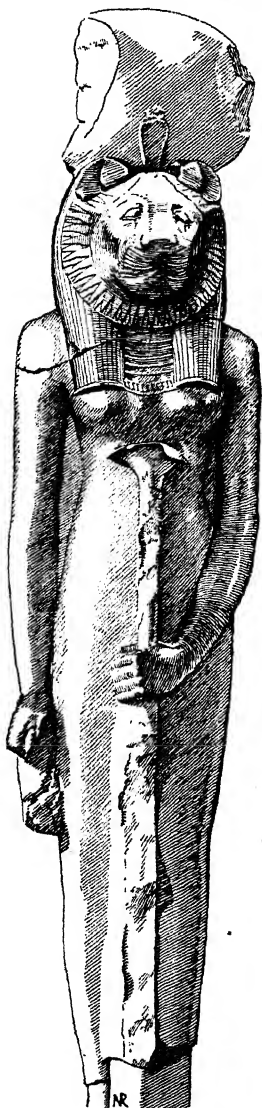
them? To what extent, in gold and silversmiths' work, shall he depend upon solder and the blow-pipe? The illustrations of goldsmiths' work on page 85 show three absolutely



92. THIRTEENTH CENTURY STONE CARVING—FRENCH.



93. RENAISSANCE MARBLE CARVING—ITALIAN.



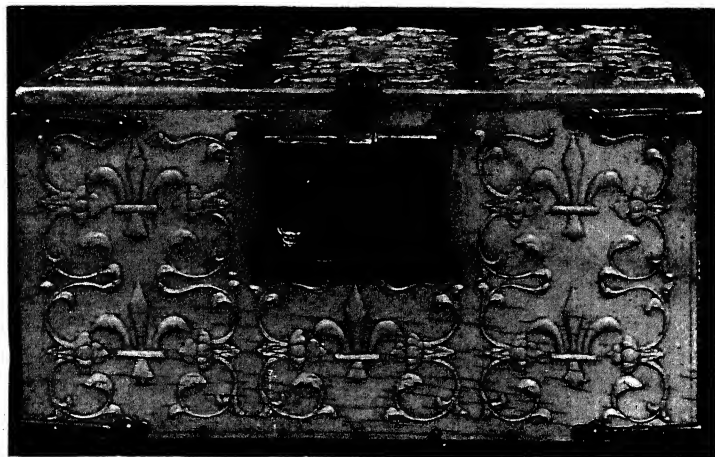
94. EGYPTIAN BASALT
CARVING.

different means of producing a raised pattern. In the simpler Anglo-Saxon pendant the pattern is produced by thin wires of gold soldered on to a thin circular plate. The more elaborate interlacing of the other is beaten up out of the plate itself. In the Etruscan cup (the general design of which is shown on page 86) only the long bulbous features are beaten up, the more delicate lines are produced by minute pearls or grains of gold soldered on to the surface of the cup, a kind of work peculiarly adapted to gold, which is easily soldered.

There are designs, of course, which might be rendered in either of these ways, but the design of a practical goldsmith would be very considerably influenced by the method or methods to be employed in its execution.

When it comes to relief on a larger scale the choice of the artist lies between carving and modelling. And they are very different arts, logically involving very different treatment, and, in ornament, leading to characteristically different design. I say "in ornament" because there is, no doubt, a point in fine art when the expression of beauty, whether of form or feeling, overrides all technical consideration excepting that of adequate expression.

Even in carving, though we use the same term no matter what it is that is carved, the material makes all



95. FRENCH RENAISSANCE IVORY CARVING.

the difference—that and the tool employed, knife, chisel, or gouge. It is in the first place to the knife that we owe “chip carving” (81), a pastime well within the range of any sailor handy with his knife, and practised by all manner of primitive people to roughen and enrich the handles of their clubs, paddles, or any implement of which it was necessary to get a firm grip. The little triangular pockets which are a feature in the design of chip carving all the world over, are the very simplest thing to do with a knife. It is about the first thing also that a beginner is likely to do with a chisel.

Chip carving is, of course, a most elementary form of work; but it is none the less sufficient for many very useful decorative purposes, if only those who practise it would resist the temptation to worry with it every single inch of the surface to which, sparingly employed, it would give value.

The gouge gives sweeping lines, and was in old days most effectively employed by joiners without pretensions to

96.
GREEK IVORY
CARVING.



art to give the finishing touch of enrichment to their work. They, too, abused it—that was their want of cultivated taste—but their work was truly decorative; and the scoop of the gouge led them to a form of design which showed at once (82) the instrument employed and their skill with it.

The anxiety of the incompetent is always to efface the mark of the tool, because it betrays them. A skilled workman on the other hand, even when, as in the case of the salt bowl illustrated on page 89, his design is reminiscent of embossed metal, will make such frank use of the gouge that you feel that his pattern, or at all events the detail of it, grew out of its use. The grain of wood allows a longer and more precise stroke than stone, and the evidence of this direct and certain line gives character to all simple wood carving, and to the best and most accomplished of more finished workmanship. What the man in the crowd admires in the work of Grind-

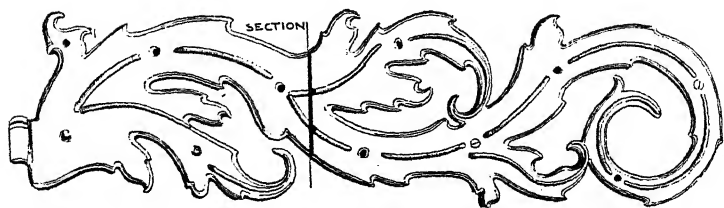
ling Gibbons, is the resemblance to nature: what the carver appreciates, is his treatment, the mastery of his direct stroke—expressive not only of wood, but of the softish lime or pear tree in which he worked.

The detail of Indian carving on page 90 (modern, but traditional) is almost as simple as the European joiner's gouge work, only it is more artfully disposed.

The carrying further of the simplest and most direct workmanship is shown in the portion of a cassone (85), in which ornament of a type familiar in marble distinctly differentiates itself by its handling, and could, even in the reproduction here given, not possibly be mistaken (by any one appreciative of treatment) for anything but wood. This, it may be said, is at some cost of modelling. Nothing essential to relief or modelling is sacrificed in the arabesque (86) from the stalls of S. Severino at Naples, in which the hand of the wood carver is hardly less apparent than



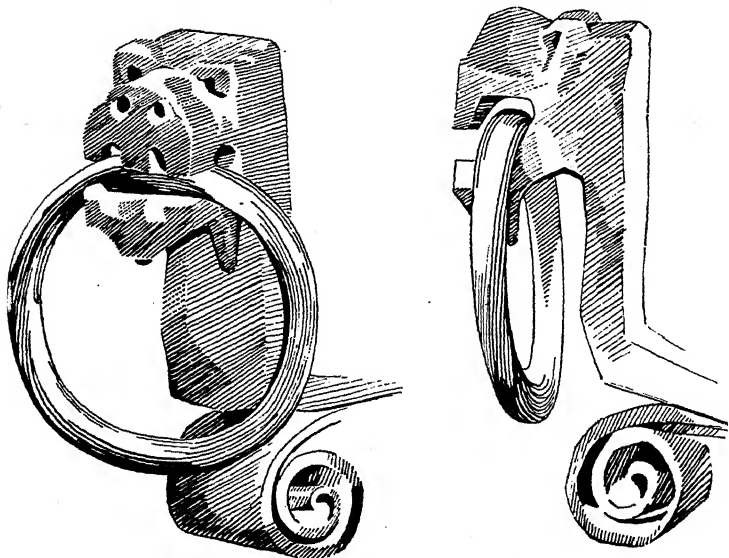
97. GOTHIC IVORY CARVING.



98. CHISELLED IRON HINGE.

in the cruder work already discussed—of a wood carver, too, as sure of what to do in walnut, and just how to do it, as Grindling Gibbons—for whose looser design, by the way, the artist is less to blame than the times in which he lived.

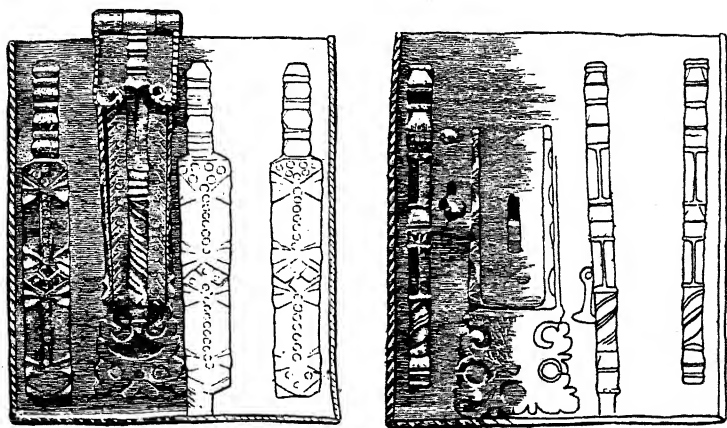
A quality expressive of wood carving is exemplified in the detail from a French coffer (87). It is not only that very flat relief like that is suitable to the surface of a coffer, but the modelling is got without roundness at all; the wood has



99. CHISELLED IRON TERMINALS.

plainly been scooped away from the surface of the leaves, to give them their delightful variety of surface; the furrows of the gouge are left to tell their story.

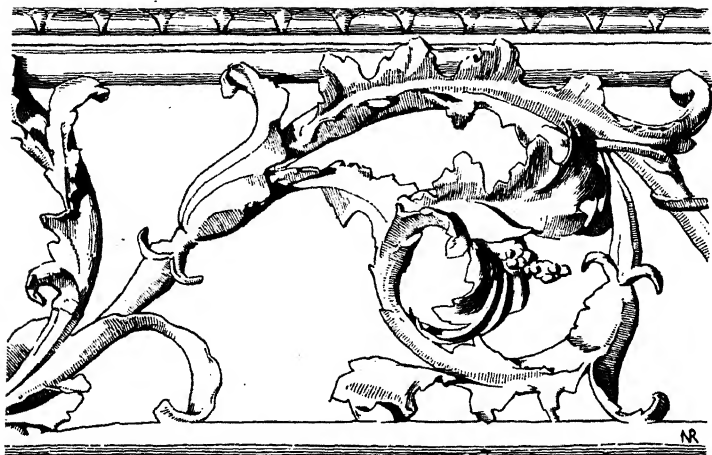
A very different specimen of wood carving, the German cupboard door (88), points to the time when another instrument, the drill, came into use in the carver's shop—a little too certainly perhaps: there is a monotony of puncture which strikes one as rather mechanical. More judicious use of the instrument is shown on page 271, not by any means a



100. CHISELLED IRON LOCK PLATES.

mechanical piece of work, though the family likeness between the two doors is striking. We find the influence of the drill again in the Byzantine rendering of acanthus foliage borrowed from the Greeks.

In stone the carver (see the spandril from Wells Cathedral, page 95) got something of the spring of life into very conventional foliage by sweeping lines of growth; but in the work itself, though it is not possible to show this in the drawing, it is plain they were not cut with a sweep of the gouge, like the late Gothic border in wood on the same page.



101. RENAISSANCE BRONZE CASTING.

The treatment of the leaves is there again, perhaps, suggested by beaten metal work, but they become in the carver's hand characteristically wood-like.

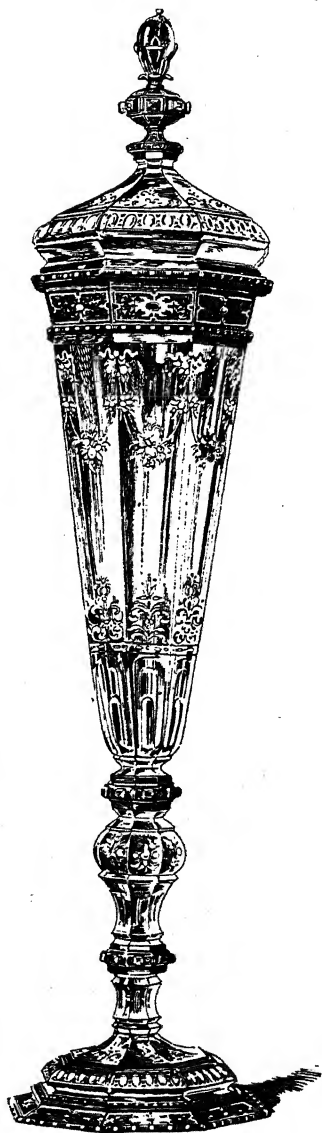
It will be seen at once how different in character from wood carving are the Romanesque and early Gothic stone carvings from Le Puy and Laon (91 and 92). Of these the Gothic work has the rounder look, in strongest contrast to the flat concavity of the ivy leaves carved in walnut on page 93. The Romanesque leafage is reminiscent of classic acanthus foliage, reduced by the simplicity of the rude worker in coarse-grained stone to something which we recognise as the style of his period. More properly it is that of his material, tools and artistic naïveté. The very mention of an historic style conveys at once to the educated mind a clear idea of character. But that, as before said (pages 70 *et seq.*), is the outcome not merely of national temperament, but of the material in which the people worked. We have no difficulty in distinguishing the carving of Egypt or Greece, of Mediæval England or Renaissance Italy; but we recognise

it plainly also as carving, and as carving in the material of the country—though of course the local conditions of sunshine or grey skies, of direct or reflected light, had always a say in its character.

An Italian of the Renaissance, working in a sunny climate and in marble, worked very much in the classic manner, the refinement of which was made possible, if it was not suggested, by the quality of hard limestone. The texture of the flowers in the Italian scroll, shows, even in the drawing on page 97, the marks of the chisel—not ploughing along like the gouge, but driven by a succession of little taps of the mallet.

When by chance the work of the sixteenth century artist happened to be in sandstone, it had more the coarse character we associate with the idea of Gothic. The somewhat savage enrichment of our own Norman buildings forcibly recalls the rude way it was done. It is more properly speaking chopped than carved.

Just as the refinement of Greek and Italian Renaissance ornament is by no means independent of the marble in which the sculptor worked, so the restraint



102. CUT CRYSTAL.

of Egyptian design is not to be credited entirely to symbolic expression and artistic reserve. Working in granite or basalt, the carver was under no temptation to insist upon the folds of drapery or the curls in a lion's mane. It was certainly not artistic incapacity which prevented the carver of the noble figure of Pasht (94) from indulging in detail; and, had he been working in a softer material, he might very well have gone beyond the simplicity which gives such astonishing dignity to his design.

Ivory is a material which lends itself to the simplest as well as the most finished carving, to pattern just grounded out, little more than flat engraving, and to



103. ANCIENT CUT GLASS.



104. CUT LEATHER BOOKBINDING.



105.
EMBOSSED LEATHER
INSTRUMENT CASE.

minutely worked ornament (95). The design, however, is restricted by the size of the tusk and even by its shape. In the fourteenth century Madonna (97), no less than in the earlier Greek figure of a tragic actor (96), the twist of the figure may safely be ascribed to the curve of the tusk out of which it was carved. The carver, that is to say, cut his composition according to his ivory.

Mediaeval blacksmith and locksmith, also, used the chisel under severe restrictions, and were as little likely as the Egyptian carver, to indulge in florid forms of ornament. The hinge cut out of solid sheet metal (98) is a very different thing from what the smith habitually did in hammered work. His terminal heads too (99) have an Egyptian simplicity; but their squareness comes from the fact it was iron he was chiselling—to which also we may attribute the angularity of design in his lock-plates (100), a sort of notching or facetting peculiar to and expressive of the locksmith's means.

Cast metal has naturally the qualities of modelling, subject, of course, to the condition that it shall "draw" from the mould. And there is the further opportunity of chasing the cast. Of this, it may be said that, either it should be thoroughly done, and carried in fact to a point of perfection beyond the founder's art, or the metal left as



106. QUILTED SILK.

nearly as possible as it came from the mould. Half measures are seldom satisfactory. The designer of the screen at Prato Cathedral, a part of which is given (101), has accepted the current type of acanthus scroll, but his version of it is what neither carver nor modeller would have made of it, and may be fairly accepted as appropriate to bronze.

It is rather strange that, in face of the triumphs of the bronze founder, we should persist in denying the artistic possibilities of cast iron. There is nothing contrary to art in iron casting—except the use we make of it, and in particular our futile attempts to reproduce by means of it wrought-iron forms. Memories of what has been done at the forge hinder our appreciation of what the foundry might do. It may not be so easy to cast in iron as in bronze; but can any one doubt that if the great German and Italian founders had had our



107. PUNCHED SILVER WORK.

appliances they would have stopped short of great things in iron. All that is wanted to make iron-founding an art creditable to the century is that spirit of artistic craftsmanship, which informed, not only the great sculptors of the Renaissance, but the mediæval smiths and bronze workers whose names are not even known to us.

To return to carving and the influence of material upon its design. There is a squareness, once more, about the workmanlike cutting of crystal (none the less carving that

it is cut upon the wheel) which tells (102) both of the way the cutting is done and of the material, faceted to catch the light and give the prismatic quality, in pursuit of which cut glass has since been deprived of all artistic interest. Facets are rightly calculated to show the quality of "flint" glass (as distinguished from "soda" glass) perfected in deliberate imitation of rock crystal. The modern manufacturer knows no more where to stay his hand than the chip carver who patterns his panel all over with monotonously fidgety mechanical detail. More interesting design, in cut glass, derived no doubt from earlier crystal cutting, and in imitation of it, is the old German cup on page 106 devised with plain intent that the opposing surfaces should gleam like crystal.

Cut leather lends itself to ornament which could hardly be anything but what it is. The process employed is to



108. SIMPLE BEATEN SILVER WORK.

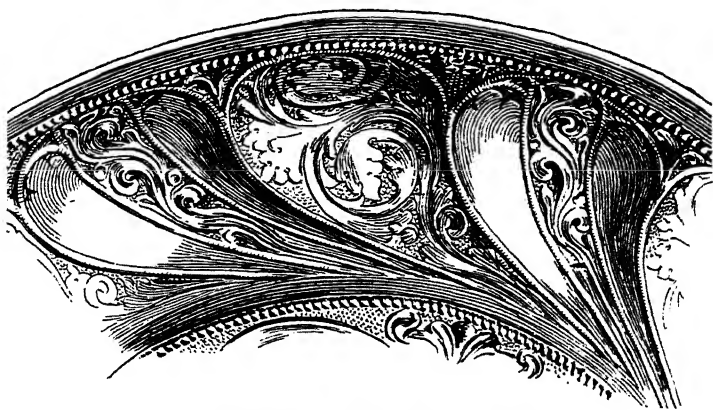


109. EMBOSSED, PUNCHED AND CHASED SILVER.

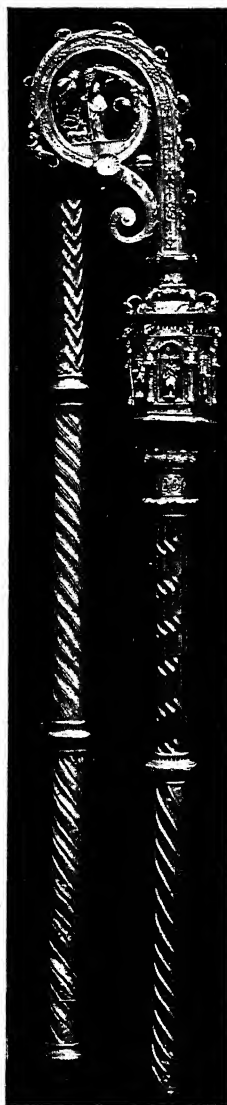
soak the hide (perhaps in boiling water), and with a sharp knife cut in the outlines of the pattern, punching down the ground to a lower level (consequently throwing it into slight relief) and pushing up more salient parts of the ornament from the back. Portions of the ornament are also pressed down from the front. But, apart from that, flat surfaces have a way of shrinking from the incision, so as to give them a slight concavity. That is to be seen in the bookcover on page 107, and there is more individuality and consequent charm about flat design of that kind. Leather may be beaten up and punched down until all trace of the knife is lost; and, owing to the deep colour of the old leather, the boxes, powder flasks, and instrument cases (105) wrought in this way, have much the appearance of beaten bronze. The opposite effect to that given by the shrinking or curling up of the leather as it dried in flat cut-work occurs where a soft material is sewn upon another. It

results (more especially if there is any sort of padding between) in a puffed up look, at once indicative of the work and in itself pleasing. Except for the more crinkled surface where the silk is puckered, the quilting on page 109 might be beaten metal.

Repoussé ornament itself takes two rather distinct forms, according as it is punched from the front or beaten up from the back. The first of these processes is very clearly illustrated on page 110, where the all but flat strapwork is relieved against punched grounds varying in texture according to the punch used. The design of the strapwork is, here, not very interesting; but the play of surface in it and in the punched diaper work is delightful. The silver dish on page 111 is interesting for the naïve way in which it illustrates the evolution of embossed design. You read in it, as in a confession, how the silversmith marked out on his disc the rings and rays to guide him, then beat up the vesica shapes radiating from the central boss and following round the border, added smaller circular bosses between, and further embossed the bosses with seeds or



110. EMBOSSED AND CHASED SILVER.



III. BEATEN SILVER
CROZIER.

pearls, finishing with rings of pearls and other lines to steady the effect. Simple as it is, the result, in silver, is far more satisfactory than the most part of more ambitious embossing.

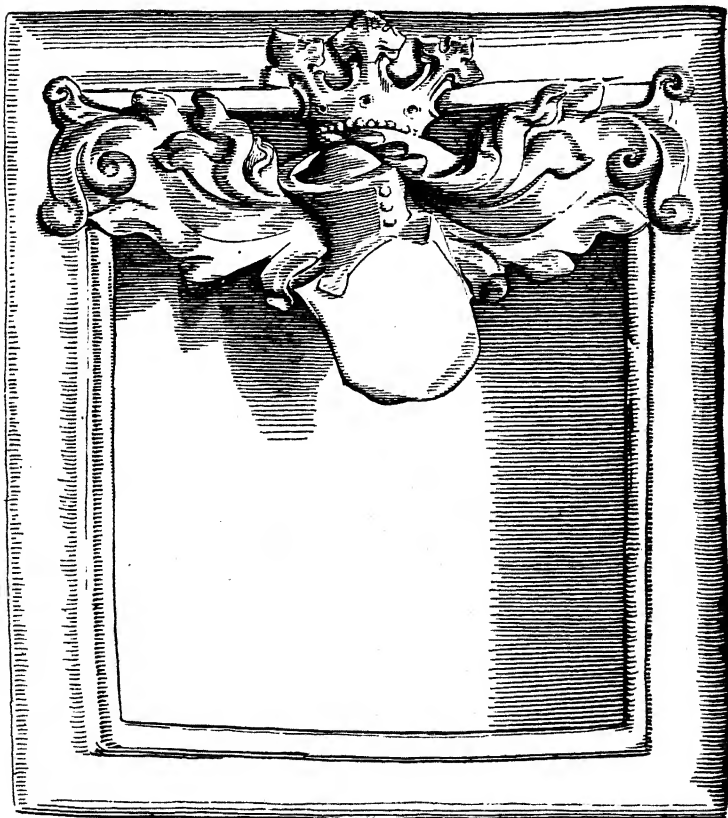
In the Russian bowl on page 112, two processes of work are used—the main forms of the vessel are beaten into prominent relief from within, and then enriched on the face, alternately with chased ornament on a beaten ground and with punched diaper.

In the rim of the Venetian bowl again on page 113, bulbous forms of a characteristic kind, which runs through embossed metal work of widely different times and countries, are beaten up from the back, and then chased from the front. This particular design is interesting for the clever way in which the alternate divisions are broken up so as to give variety within the shapes, contrast of surface, and just the right proportion of plain silver. The reproduction of the pastoral staff on this page is on too small a scale to do justice to the beautiful embossing on the upper part of it; but the rod alone shows admirable varieties of embossed surface perfectly adapted to its end.

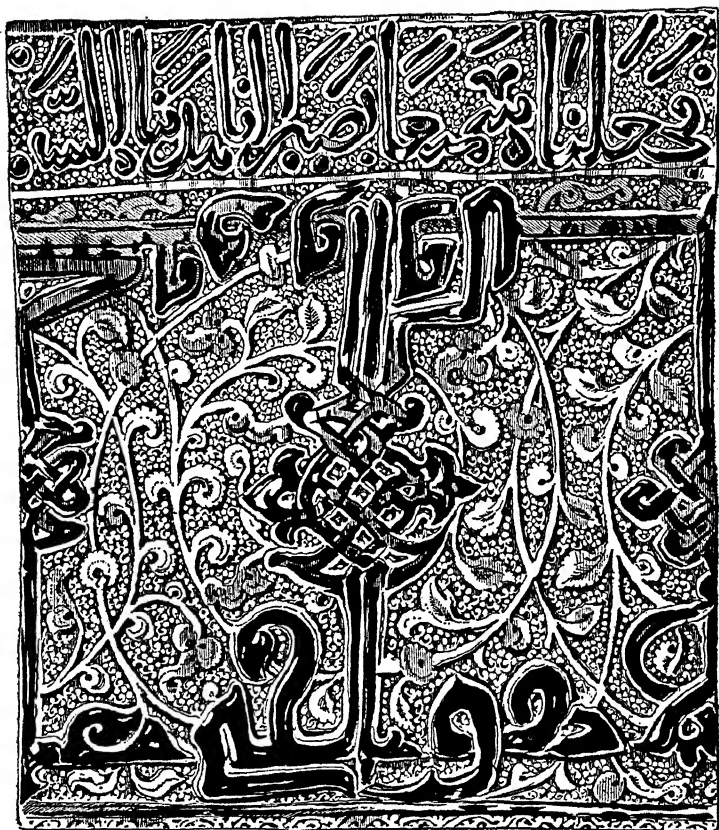
The sympathetic embosser conceives his design as bosses of various proportions and shapes, connected perhaps by less bulbous shapes into a whole; and, though he may work

them into leaves, or fruit, or living creatures, he never forgets that they are bosses. Embossing, whether in leather or metal, comes sometimes very close to the effect of modelling, which differs from carving very especially in that, whilst the carver gets relief by cutting away from his material, the modeller gets it by adding always to it.

The sympathetic manipulation of the soft clay is to be



112. MODELLED EARTHENWARE.



113. PERSIAN EARTHENWARE WITH INSCRIPTIONS IN RAISED "SLIP."

felt, it seems to me, in the treatment of the mantling in the glazed earthenware on page 115, very different from the crispness of a cut surface. The material allows a certain sketchiness. One may easily suggest in clay what it would be very difficult to express in carving, even if the idea were possibly to be conveyed in clean cut form; and design depending upon precision of line is rarely the thing to attempt in it.

Yet looser form than is given by modelling clay, comes of working in the wet clay with which the potter often gets relief—the Persian, for example, who pours out his creamy slip (compare page 148) upon the surface of his tiles (113, 173, 253), allowing it to settle very much into its own shape—shape which is at all events significant of the way it was dropped on, not modelled.

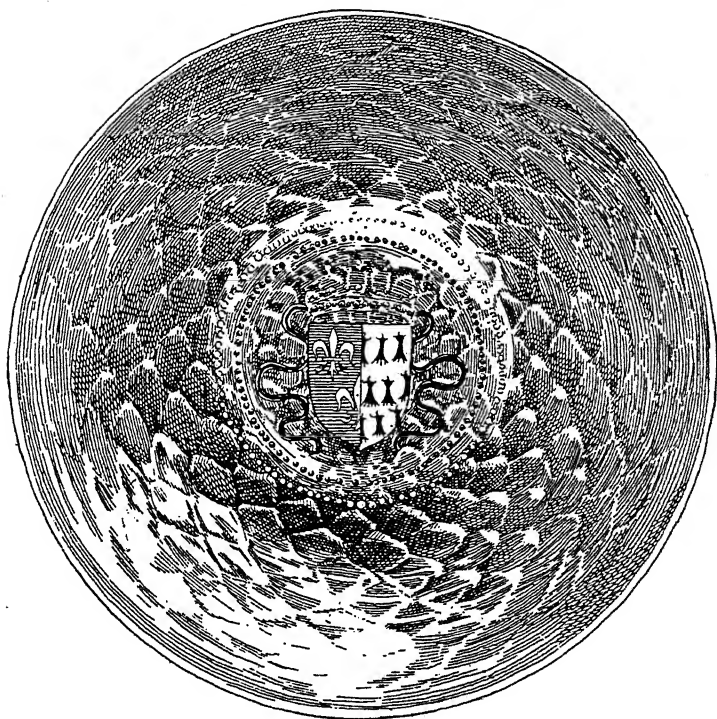
A similar looseness results from a similar way of working in gesso. The blunt look of the ornament below, which would be objectionable in carving, as well as the rather broken line which would be against it in embossing, is here justified as being the expression of the material—gilded gesso. It is quite apparent how the relief is got by dropping on the gluey plaster and just trailing it with the brush. The artist, intent upon the relief necessary to enhance the brilliancy of his gold, was rightly satisfied with very sketchy modelling.



114. GILDED GESSO.



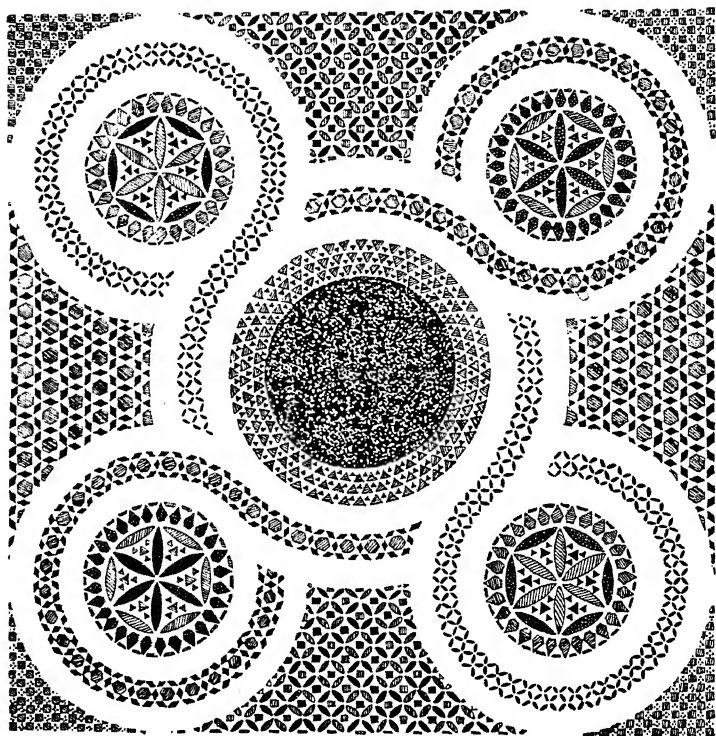
115. GESSO.



116. GLASS BLOWN INTO A MOULD.

The use of gesso is carried further in the Italian shield opposite (115); but even there the method is employed to more characteristic purpose in the diaper upon the ground than in the griffin, admirably as the charge is treated.

We Britons are much too fond of hard precision, regardless of the fact that even dumb ornament may be expressive of a workmanlike device. Compare the cut glass on page 106 with the Venetian cup above, in which the delicately suggested pattern is produced by blowing the cup into a mould, naturally not giving any very sharp impression,



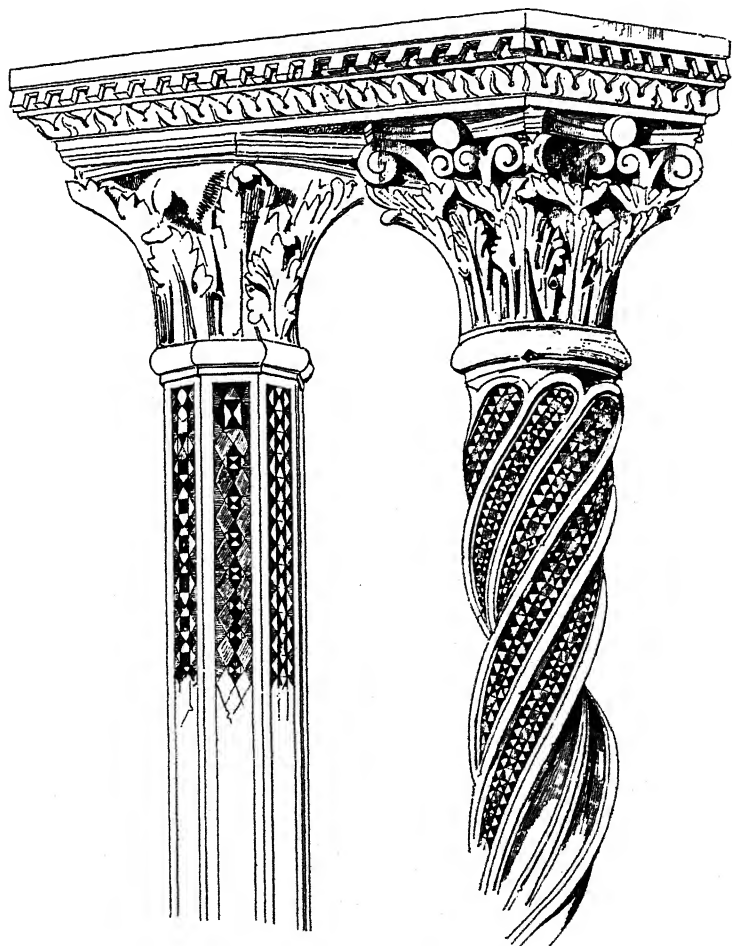
117. OPUS ALEXANDRINUM—THE UTILISATION OF WASTE.

and it will be seen that there is in each a quality, which, as it is inherent in the process of workmanship, ought not lightly to be sacrificed by the worker, nor left out of account by the designer.

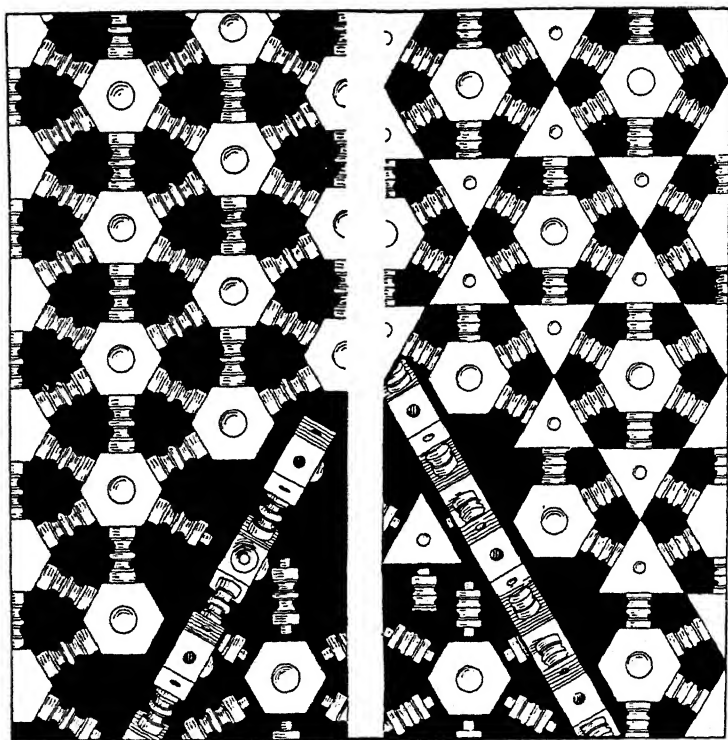
The plain hint of the material was promptly taken by the designers of the pavements in what is known as Opus Alexandrinum (117), who made such splendid use, not only of waste chips of porphyry and serpentine, but of great slices of circular and other columns, which they introduced as a foil to the geometric pattern-work built up of the smaller

fragments. The disc or panel forms a perfect focus to the design.

It is curious to reflect that, but for the economic instinct prompting man always to find use for a waste product,



118. GLASS MOSAIC INLAY.



119. TURNED ARAB LATTICE WORK.

nothing like *Opus Alexandrinum* might ever have been done. No one, we may be sure, would have thought of cutting up precious porphyry and serpentine into little bits, if he had not found it already broken into scraps too small for bolder use. The artist proved his capacity by the effect he got out material in itself ineffective.

To the circumstance that appliances for cutting hard stone were not in the old days so perfect as to tempt the workman to shape his triangular or other units with anything like

geometric accuracy, we owe, also, the satisfactory effect of the old patchwork of white and colour, with its irregular veining of grey cement between—so absolutely unlike the clean-cut, close-fitting, modern work with which the ubiquitous restorer is fast replacing it.

The Arab or Byzantine workman, it may be said, and with truth, was never prone, as we are, to mechanical precision; but, then, our modern inclination in that direction is, in no slight degree, the result of our facilities. Having perfected mechanism, we become its willing slaves.

The geometric character of this marble pattern-work points to its Oriental origin; but, traced to its first cause, there can be no doubt that the unequal colour of the marble (no less than the ease with which triangular and other right-lined cubes could be shaped) encouraged the use of severe pattern. The danger inherent in purely geometric design is a tendency to be mechanically precise; and accidents of colour, sure to occur in marble, just counteract it.

There is a corresponding fitness between the hard forms of geometric mosaic (118) and the bright colours of the glass employed in it. The little facets of glass catch the light at all manner of angles; they glitter each according to its own bright will; and the shimmer of the surface, nowhere absolutely even, puts the possible contingency of harshness out of the question.

In wood inlay again, originally equally geometric in design, the same fitness between form and colour is to be observed, the same softening of hard forms by colour naturally uneven. Uncertainty of tint makes amends for certainty of shape, and gives an air of mystery to what might else appear mechanical.

It is plainly upon the lines familiar in the geometric mosaic of the East that the Arab lattices opposite are built; but would they ever have been put together just in that way but for the opportunity thereby offered of using up

little pieces of wood not without value in a land where timber was scarce?

In all applied art and at every stage of it the work in hand points out the treatment which is appropriate. It suggests of itself the degree as well as the kind of convention it is expedient to adopt. The artist has but to heed its prompting, and it will tell him what to do and when to stop doing it.

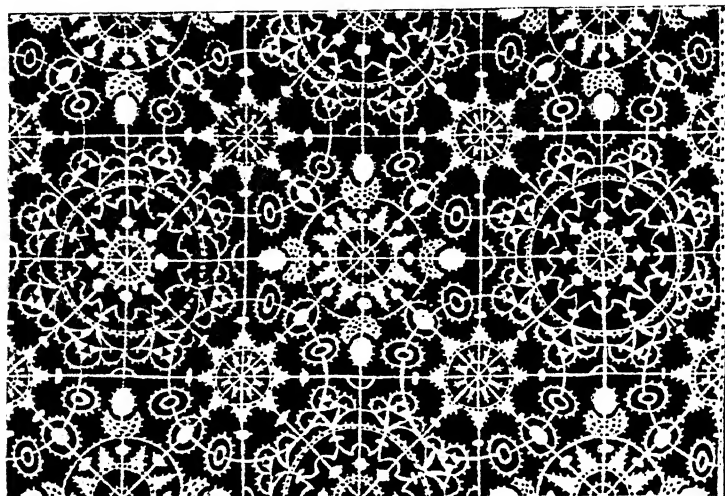
VI. AGAINST THE GRAIN.

Style the result of fit treatment—Borrowed character—Simulation—Showing off—Obedience to conditions—Ornament not independent—Character lost in the process of mechanical manufacture, sacrificed to pictorial ideal—Finish to be aimed at, not smoothness—The mark of the tool—Affectation of rudeness—In touch with the times—The artist's and the manufacturer's point of view—Art not independent of science—The way it is done—Workmanlikeness.

STYLE rightly understood is the character which comes of accommodating design to its use and purpose, to the time and place to which it belongs.

International traffic, to say nothing of "World's Fairs," has gone far to wipe national character out of design. Mechanical appliances have done much to prevent characteristic treatment of material; but the fact remains that all such character gives interest to ornament. The most satisfactory ornament, in fact, is that which comes of designing and working according to our national and personal temperament indeed, but with the grain of the material; of treating it after its kind; of being in short equal to the occasion. Ornament is above all things opportune. The badge of all who profess it is submission. To indulge in carving so bossy that it might have been beaten up in metal, in modelling so crisp that it might have been cut with a chisel, in painting so mechanical it might have been printed, is not only rebellion, but rebellion to very little purpose.

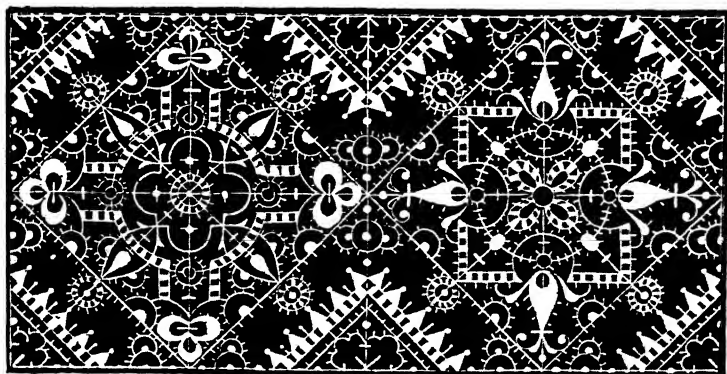
Inconsistency reaches its crowning point in the deliberate affectation of a character peculiar to some other material or



120. SO-CALLED "GREEK" LACE DESIGN—OLD ITALIAN.

method than the one employed—a folly not altogether, as is sometimes implied, the invention of our own times. Late Gothic stone carving is often more than reminiscent of the forms of goldsmith's work ; and Elizabethan woodwork affects the form and very facets of Brobdingnag jewellery.

The borrowing of a form of design characteristic of another material or process is justifiable only when the borrower makes it his own—when he sees in it an appropriateness (not perhaps before suspected) to his own method of work. An instance of this occurs in a form of bookbinder's tooling unmistakeably based upon the so-called "Greek" lace opposite. It is impossible to doubt the origin of the tooling above. Imagine the lace design of Vinciolo cut in metal and the likeness between the two would be more striking still. But it is to the artist's credit that, in the first place, he has not imitated the loose line of actual lace ; and, in the second, it is to be observed that the borrowed form of pattern fits in to perfection with the process of tooling. The



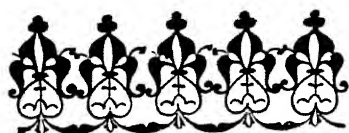
121. BOOKBINDER'S TOOLING BASED UPON "GREEK" LACE.

tools needed for the execution of such patterns are easy to cut and their manipulation is equally easy for the "finisher." It seems, then, that the binder is quite well advised in adopting a style of design, borrowed though it be, which he can turn to such workmanlike use.

Another instance of adaptation is, as it happens, from the tooling of the bookbinder also,—and in this case the actual tools of the binder were employed upon pottery, of all things. Yet it was quite a right use to make of bookbinder's tools: to stamp them into softish clay (122), to cover that part of the vessel with clay of another colour, and to scrape off the superfluous clay from the surface so as to leave an inlaid pattern, which, when the ware was fired, was of one substance with it.

The wood carver again, it was shown page 100, makes good his claim to forms suggested by embossing when he shows how the gouge itself would almost have suggested them to him.

There would be less to say for the "gadrooning" of the earthenware jar on page 129 (compare it with the embossed gold cup on page 86), were it not *actually* embossing. The



122. PATTERN STAMPED INTO
POTTERY WITH BOOK-
BINDER'S TOOLS.



123. PATTERN STAMPED INTO
LEATHER WITH SIMILAR
TOOLS.

potter has, as a fact, pushed up these embossed forms from the inside with his finger in order to get the rounded surfaces which will catch the light and give value to his metallic lustre.

Embossed leather paper (125) as it is called is perhaps rather unfortunate in its name. As an imitation in a cheaper substance of old Spanish or Venetian leather it is confessedly a sham. But there is no very good reason why one age should not do in paper what in another was customarily done in leather, and more especially when it happens that the one will answer practically every purpose of the other. The fact is that there is nothing specially belonging to leather in the old lacquered and painted leathers. Some excuse for imitation may be found in a sort of childlike propensity to copy. From time immemorial the Chinese were never quite so happy as when they were imitating in one material the effect of another, making porcelain to look like jade, glass like agate, or bronze like bamboo. And so it was, and is still, with the Japanese, who take a positive delight in reproducing in the costliest and most extravagant manner a substance of no intrinsic value whatever—evidence that it is out of the very innocence of their hearts and in no spirit of ostentation that they endeavour to deceive. It is by way of boast—but only of their own cleverness.

Italian artists, even of the period when art was at its best, had never any conscience in the matter of simulation. If they could make marbling do duty for veneer, or grisaille for

they could make marbling do duty for veneer, or grisaille for sculpture, the end justified the means to them: the effect was all they cared about. Equally bad offenders in the present day are the French, who seem to have no other idea of a wall-paper than to make it look like damask, lace, embroidery, mosaic, painting, tapestry, no matter what so long as it has no character of printed paper.

It is in contrast to mistaken methods which give no chance to the qualities inherent in every material and in every way of working it—adopted in a spirit of frivolity at least if not of pretentiousness or fraud—that the fitness of fit ornament stands out as the one condition of workmanlike design.

Apart from any motive of pretence, apart from the commercial incentive to meet demands no matter how far re-



124. EMBOSSING IN PLASTIC CLAY.

moved from the natural course of workmanship, a workman is led by a workmanlike instinct to do what is most unworkmanlike. Whatever is reputed to be beyond the scope of his particular art, that he is tempted to try and do; natural ambition it may be or foolish vanity; unhappily it leads him many a time astray. It is a besetting sin of the exceptionally clever workman to want to get more out of a method than it naturally gives, to think only that worth doing which will show off his skill. He will do it even at the cost of character. So it happens that we are asked to admire, for example, carving which might have been modelled, terra cotta which might just as well have been stone, cut leather which looks more like beaten bronze.

The wrong thing is done sometimes in such a masterly way as to compel admiration. It needs all the excuse of consummate accomplishment. High finish has its own charm. But if it wipes out all record of the way the work was done, the price paid for it may be more than it is worth.

The attraction of a *tour de force* to the worker is obvious: to any but himself it is more interesting than attractive. We ask ourselves was it worth doing? was it worth while forsaking safe and satisfactory lines for that? An artist should know where to stay his hand, and have the self-restraint to stay it. And, in ornament applied to any useful purpose at least, the point at which to stop is where the material tells you to desist. The "convention" which comes of obedience, not to tradition, but to the conditions of the case in hand, is always right. Often it is singularly satisfactory. We ask no more of basket-work than ingeniously plaited pattern (65); no more of joinery than well-proportioned panelling (126); no more of turning than the lathe will give (127). A spidery pattern in black on white is more to the purpose of a pavement (128) than the battle picture in coloured marble mosaic which ranks as a treasure of the Naples Museum. And reticence needs all the more to be insisted

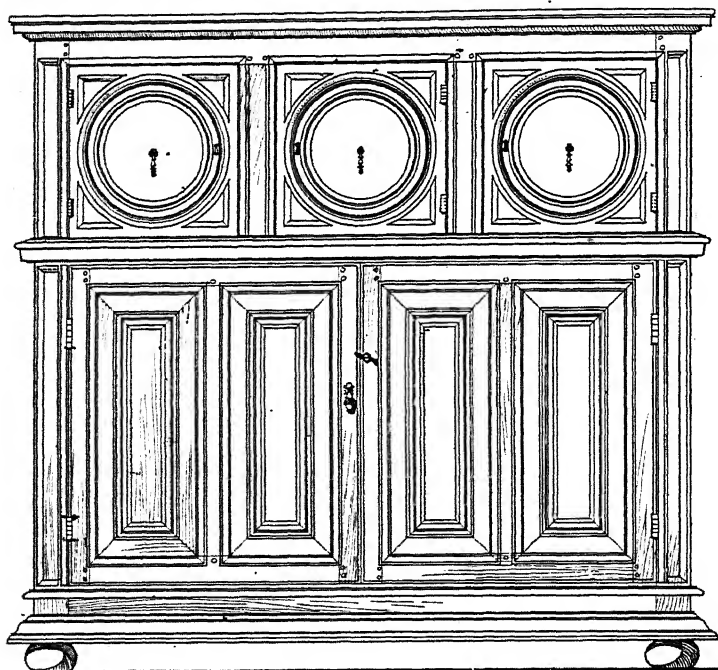


125. EMBOSSED LEATHER—MODERN.

upon because, once go beyond the resources of your means and there is no knowing where to pull up. You may go on until you reach a lower stage of the sort of art called "high"; but only at the sacrifice of those qualities of usefulness and fitness which are the sole excuse for art, excepting the exceptional. Here and there a work of art justifies by its beauty its claim to stand alone—it reigns supreme. In all but the greatest, and particularly in ornament and in

applied art, the claim to independence is presumptuous—neither more nor less.

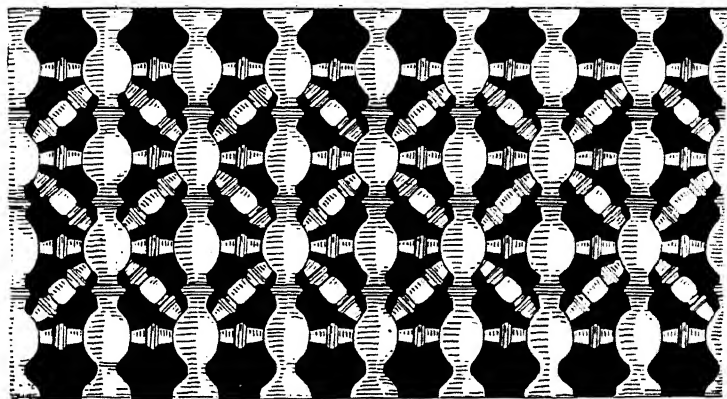
If we miss in modern ornament the character which comes of workmanlike treatment, it could hardly be otherwise. In the process of modern manufacture everything gets planed down to a marvellous smoothness; the ideal of execution



126. PANELLED JOINERY.

is mechanical precision; and design itself (no longer affected by the old conditions of execution) sinks into dull monotony.

But the fault does not lie altogether with our much-abused machinery, though mechanical execution has helped both to pervert artistic taste and to prejudice men's minds in favour of something in the way of workmanship which



127. ARAB TURNING.

is rather smug than beautiful or really finished. There is another element at work, which seems not to have come into operation until comparatively modern times when art forsook the path of industry—since when the artist is too much inclined to accept a pictorial ideal of art which, though it may be the highest, is not the one to which the designer is pledged, not the one in which success is open to the workman.

To aim, for example, in tapestry at effects more proper to painting is to forego the possibilities of the loom for what, even if attainable, is to be had only at a cost of labour not justified by the result. However satisfactory the copy of a painting in arras, it certainly does not gain by translation (at enormous cost) into wool: such difference as there may, and must, be between the two is all in favour of the painting. Who would not rather possess one of the Cartoons of Raffaele than the woolly reproduction of it to be seen at Beauvais or Dresden?

It is no fault of Raffaele's that many a fifteenth-century designer unknown to fame but accustomed to work for the loom, and perhaps only for the loom, produced more satisfactory wall hangings than the greatest genius unconcerned

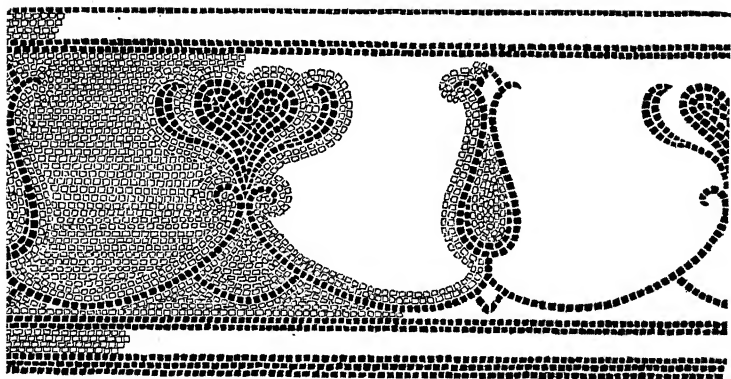
about its technique. Still there is a lesson for us, and some consolation in the success of the skilled craftsman where the great painter failed—for to make a design which in execution works out less satisfactorily than the drawing is to fall short of practical efficiency. It is not so easy as some seem to think for even a great artist to step down from his eminence and show the expert workman how to do it: all trades want learning. Another case in point is mosaic. Great painters have been enlisted in its service; but it is not the work of Titian or Tintoretto that we linger over in St Mark's. The archaic figures of the earlier mosaicists, severely silhouetted against their gold ground, give us infinitely more satisfaction.

The lesson of Ravenna and Palermo is that the satisfactory mosaics are the work of men accustomed to design in tesserae. From the middle of the sixteenth century onwards tapestry weavers seem with one consent to have agreed to work against the threads, mosaic workers to design as though it were for paint—and not one of their works in these kinds will compete for an instant with more workmanlike design.

It is not then so entirely mechanism as—civilisation shall we call it? which smooths all character out of workmanship—until, if we want idiomatic expression in design, we must travel back to some remote period of craftsmanship.

Our modern appreciation of nature is the plea on which we depart from despised "convention." Artists have always loved and studied nature, even when they treated it so as to convey by their rendering that it was the doing of carver or modeller, weaver or needlewoman. Whatever the work it was removed by a touch of the tool not so much from nature perhaps—the instinct which directs such workmanlike modification is natural enough—but from the imitation of nature. Pray art, deliver us from that!

The workmanlike touch grows, unhappily, rarer; the note of individuality is less often struck. Workmanship tells less and less of the workman. He no longer confides in us, nor

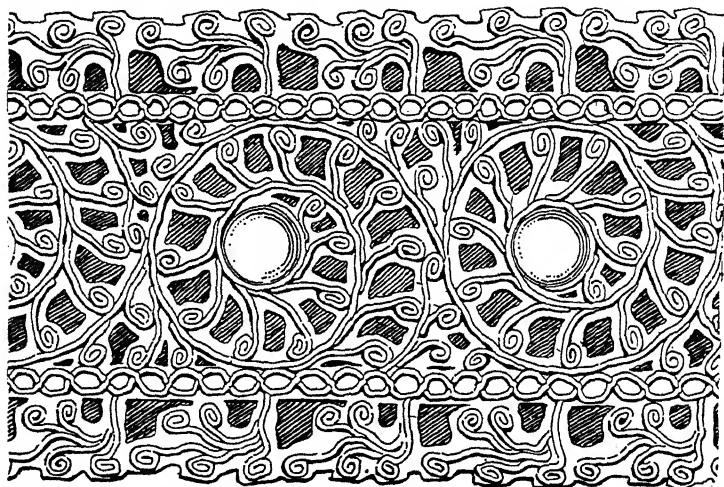


128. APPROPRIATE MOSAIC PAVEMENT PATTERN.

talks to us even; he has no time to gossip over his work. The fault of modern execution is its smoothness, tending, for all its elaboration, rather to polish than refinement, making no sort of amends for simple workmanship, for crisp and vigorous handling. Finish does not mean minute detail, but perfection and refinement, by which alone smoothness is justified. The tale of the tool (brush, chisel, hammer, no matter what) is never discreditable to the workman who can use it, and to him at least it is always interesting.

There is a sort of smoothness which is artistically about on a level with the polish on a man's boots. It is that which makes one disposed to tolerate any degree of roughness if only it be the expression of vigour, freshness, individuality. The smoothness which disguises a feeble and niggling touch has no charm, nor that which panders to the popular prejudice in favour of sleek respectability. Frank workmanlikeness is none the less acceptable for a suspicion of Bohemianism that lurks about it. It is not, for all that, a thing to affect; and it is a mistake common enough in our reaction against smooth "finish," so-called, to over-accentuate the mark of the tool, and insist upon it as if it were in itself the end of workmanship.

The tediousness of commonplace mechanical production, depressing beyond measure to the sensitive artist, has induced a desire on the part of some to go back to mediæval ways of workmanship—not a very reasonable desire, intelligible as it may be. In their enthusiasm these would-be Goths have overshot their mark and scared away adherents they might by a more discreet advocacy have attracted to their side. Theirs is surely a counsel of despair.



129. CHARACTERISTIC BUT ARCHAIC JAVANESE ORNAMENT.

It is of no use trying to persuade the twentieth century to revert to the rudeness of the thirteenth. Whatever the charm of Early Gothic work, its rudeness is out of keeping with the ways of life to which we have long been accustomed ; and it is no sign of degeneracy in us to ask for something that is neither rough nor archaic. It is a pleasure to come, for example, upon an unsophisticated piece of ornament like that above, where the Javanese artificer has simply rolled up guttapercha or some such substance into the thickness of stout wire, curled it round into spirals (which remind

one of the metal worker), attached it to papier mâché, fretted away a part of the ground, and gilded the whole. There is something quite taking in its barbaric character, and perhaps a hint of something one might do ; but it would be a foolish thing for us to go and do that.

In design and workmanship alike we must go on, or give up the game. Our choice happily does not lie between the methods of mediæval workmen following the lines of tradition and those of latter-day capitalists. We have yet to try what seems the obvious way out of the difficulty in which a sudden change of industrial conditions has landed us—the experiment, not of returning to the rude or leisurely manner of old days, but of devoting ourselves to the solution of the artistic and industrial problem of the moment. The artists really effective are those in touch with their times, who know themselves not to be independent of existing economic conditions, who are in no way hostile to science or resentful of mechanical appliances which, turned to right account, might be of service to them. It is not so much manufacture that is to blame for the existing state of things as the attitude of the manufacturer—and, let it be confessed, of the artist. The conditions of modern production are out of joint. Manufacturers know too little about methods of beautiful or artistic making, even if they realise that there is such a thing. Artists know too little about the *means* of modern manufacture, which, by their aid, might be put to much more artistic use than unaided commercial or mechanical instinct can possibly make of them.

If only artists and workmen knew as much as might easily be known as to what has in the past been done, and how it was done, and why it was done so, if they but realised what can nowadays be done, and under what conditions, they would not be far off finding for themselves ways which, without going against the irresistible current of modern industry, would meet the case of art. Artists who set their face against either mechanical or scientific invention, whether they oppose

it actively or merely stand aside, only widen the breach they are always deploring between art and industry. Their attitude is the result of ignorance, more or less wilful. None the less it is want of knowing which makes them so unpractical. A designer must know what there is to know about design, handicraft or manufacture, its past achievements and its present possibilities, before he can start fair. Not until he knows both sides of the question of industrial design (its many sides would perhaps be the more just expression) is he in a position to judge between one aspect of it and another; his opinions are until then but prejudices.

It is because, unfortunately, artists so often look only at one side of it, and manufacturers only at the other—and they happen to be the two opposite sides—that they get on so badly together, and manufacture has become what it is. The attitude of artists is not always such as to command the respect of practical men. To praise the imperfections of mere accident as more beautiful than perfect workmanship, is not to show much real appreciation of design. Nevertheless the artist expert in one art, or in one subdivision of art, is curiously tolerant of imperfections in another, the technique of which is unfamiliar to him. He has been heard to say, when it was pointed out to him that what he was admiring was really only the result of careless or incompetent workmanship,—“So much the better!” and to expatiate at large upon the charms of the unexpected. But it is only in regard to crafts in which he is at most an amateur, that he gives vent to these unworkmanlike opinions. When it is a question of his own craft, he knows better than that.

The relation of science to art has never been very clearly defined. The one is in a sense the very opposite of the other, and the artistic temperament the antithesis to the scientific. But to a work of art there goes an amount of systematised knowledge which is nothing less than science—knowledge which is the necessary equipment for the successful pursuit

especially of an applied art. There is many a handicraft in which without definite scientific teaching the artist is at a disadvantage. What control can a potter have over his clays and glazes, or a cotton-printer over his dyes, without sufficient knowledge of chemistry? In truth such knowledge belongs to the very groundwork of design. And it might easily be taught, if artists were not so impatient of science, if men of science could see things more nearly from the artistic point of view. The difficulty is in imparting the necessary information in a way that does not revolt on the one hand the artistic, on the other the scientific spirit.

We talk of art teaching! Artists know that it is not art which can be taught, but only the things that go to its successful pursuit—the way to use eyes, hands, and brains, the control of such artistic faculty as may be born in a man. What training does, and teaching should do, is to make good workmen. Out of workmanlikeness art is most likely to develop itself. It is the source, too, of all a workman's satisfaction in doing, and in the doing of others. To him at least there is unfailing interest in the way a thing is done, in its character as well as its beauty. He looks for evidence of that, and delights to recognise behind the work a workman with whom to claim fellowship. It is not alone that he likes to see how some one has solved difficulties with which he has had in his time to deal, or taken advantage of an accident which occurred to him also, and ended possibly in disappointment; he has a thrill of purest satisfaction in perceiving how some one years ago and far away felt as he himself feels about his art, saw nature in the same light, accepted the same restrictions, and seized opportunities in the same way. Work thus sympathetic to him is a sort of approbation in advance of his own practice—the approbation, too, of a workman in whom he recognises a master. That warms his heart more than all praise.

VII. WHERE TO STOP.

Taste and liking—Stopping points suggested by material and process : Ex. pottery—What can be done on the wheel, and with various kinds of clay—The quality which comes of throwing clay—The very different quality which comes of blowing glass—Coated clay—Accident turned to account : Ex. crackle porcelain and crystalline glaze—Devices growing out of the nature of clay and the way it is used—Scratching through an outer coat of clay to the different coloured body—Modelling a surface to show variety in transparent glaze—Decorating clay with liquid clay or slip—Decorating glass with molten glass (prunts, &c.)—Pâte sur pâte—Pottery painting and the potter's palette—The ordeal of fire.

THERE is no more common fault in ornament than the endeavour to go too far. Artists want to do more than the conditions demand, more than they justify. In determining the limits of decoration we have to take account of the personality of the artist. It is not a question of taste only, but to some extent also of liking. One man may like more enrichment than another and yet be no less surely controlled by a fine sense of restraint.

Nor, were it otherwise, is it of any use attempting to lay down rules to be upset by every change in ever-changing conditions.

The one sure and constant rule is that, with regard at least to common things about us, use and handiness mark the limits of fit ornament. And, just as the thing itself, the material it is made of, and the manner of its making, show the way to appropriate design, so they may be said to warn the artist when and where to stay his hand.

A convenient stopping point occurs naturally where

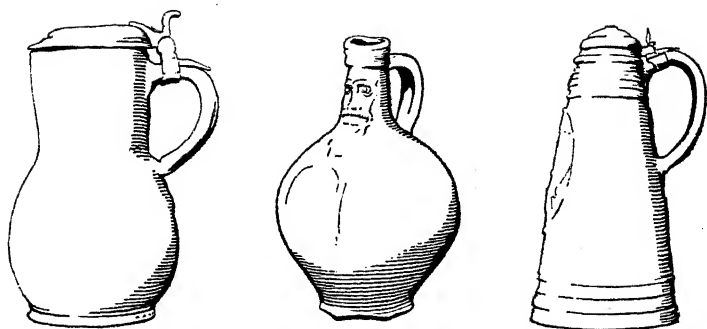
material or process itself gives out. There is always the danger that a supplementary process called in to help another may end in supplanting it.

A case in point is the art of the potter, in aid of which so many of the subsidiary arts are called in, that it may be taken as a typical illustration of the influence of handicraft upon design. The primitive way of making earthen pots is by what is known as "throwing"—that is to say, shaping the lump of wet and still plastic clay with the hands as it revolves on a circular wooden platter (or "wheel" as it is called) before

the potter. And he arrives by this simple means so directly at shapes artistically pleasing that to watch him at his work is to doubt if any supplementary process can be necessary. Almost from the moment he begins to draw up and hollow with his hands the lump of plastic clay revolving in front of him, it begins to take suave and beautiful shapes, gliding gently, as the wheel goes round, one into the other. Seeing



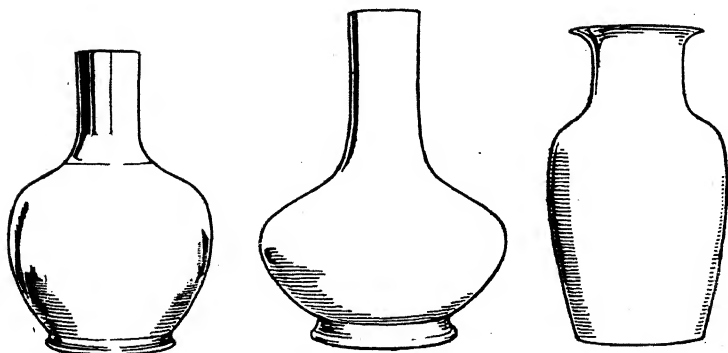
130. PRIMITIVE EARTHENWARE.



131. RUDELY THROWN GERMAN STONEWARE SHAPES.

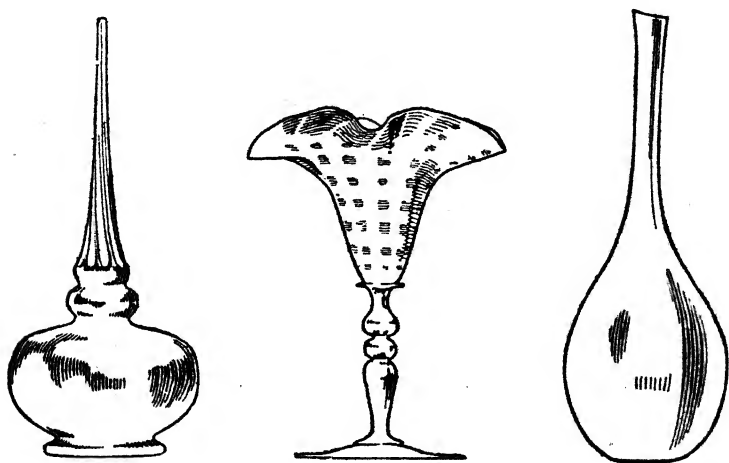
the familiar and typical pottery forms grow again so naturally under his fingers, you realise how it happens that ugly forms are rare in primitive pottery (130). It is plain that the ugliest pot ever made on the wheel must have passed in the making through more than one stage of beautiful form—lost because the workman, sitting over his work, is not in the best possible position for judging when his forms are perfect, and, as likely as not, before he is aware of what he has done, it is undone again.

The wheel, then, gives beautiful shapes typical in their



132. REFINED CHINESE PORCELAIN SHAPES.

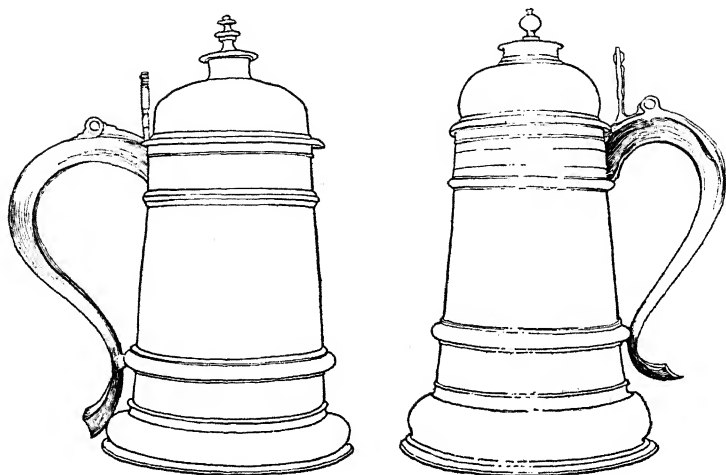
soft gradation of the action of the hand in shaping them. Why call in an after process to harden them? There may be a sameness in thrown shapes; but is there no monotony in the forms arrived at by more mechanical devices? The fact is that for very many purposes the wheel gives, and gives naturally, all the variety and beauty of form that artist need desire. And if potters were in the habit of depending upon it, they would find means of using it to yet further purpose. Reticent but effective use may, for example, be



133. BLOWN GLASS SHAPES.

made of modelling tools to give, if necessary, graduations of form less blunt than the finger tips alone are bound to give.

The charm of thrown shapes ought not, however, to blind us to the limitations of throwing. The consistency necessary to the manipulation of the plastic lump will not allow (though something will depend upon the quality of the clay itself) the throwing of shapes such as we find in the old Greek vases. They are the result of an after-process akin to turning. But their refinement is gained at the loss



134. SIMPLE METAL SHAPES.

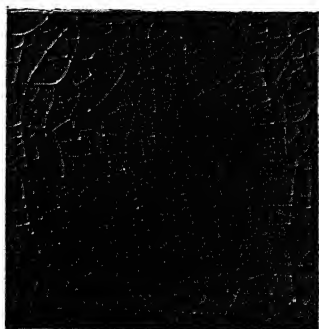
of a quality more characteristic of potting. Mechanical trimming in the half-dry state of the clay effaces what was done whilst it was amenably moist to the hand—and that so effectually that one is inclined to ask whether, if in the end a vase is to be shaved all over on the lathe, there is artistically any reason for throwing it at all, and the thing might not just as well be made mechanically from the first. Refinement of form may or may not be worth the sacrifice of the plastic quality of clay. The important thing is that we should realise the cost of what we get, and face it.

The too eager advocates of throwing forget, if ever they knew it, that the process is not equally applicable to all kinds of clay. An expert potter throws, turns, presses, or casts his vessel, partly according to the kind of shape he wants to get, and very much according to the kind of clay he has to deal with.

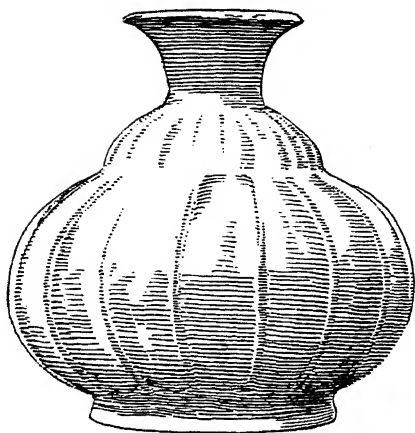
The effect of finishing processes generally is to undo something already done. The worst use to which they can

be put is, in pursuit of so-called "finish," to wipe out idiomatic expression. A man who glasspapers away all evidence of gouge or chisel does not deserve the name of carver.

No less futile is the sacrifice of the character belonging to a material to the endeavour to get a quality peculiar to some other—as when pottery aims at airiness of form. The potter will plead that his trade is not glass-blowing but pottery. Then let him shape his aims accordingly, and his pot according to his clay. Having adopted it as his medium he is, so to speak, pledged to keep within its limits. Why not be content with the subtle and beautiful forms the wet clay gives. The coarsish forms of Rhenish stoneware (131) satisfy us because they come of the use of a stiff body, the blunt forms of common earthenware because they belong to more plastic clay. We do not ask of either the distinguishing qualities of porcelain (132), still less of glass (133) or metal (134). The Greeks, it is true, produced in earthenware forms more proper to metal; but it is not as potters, but as masters of form, that they have earned our admiration; we have reason to believe that the earthen vessels we treasure made no pretence to be more than relatively cheap imitations of costlier bronze ones, too precious to be buried with the dead.



135. CLAY SHRUNK IN THE DRYING AND "CRACKLED."



136. VASE MODELLED TO GIVE VALUE
TO THE GLAZE.

If lightness is the quality desired the wiser plan would be to employ a material of which that is the characteristic—glass, for example, which, in its molten state, is blown like any other bubble, and has all the charm of airiness (133). (The Phœnician bottle on page 237 shows another characteristic glass shape—a shape not unlike that of the glass bubble when

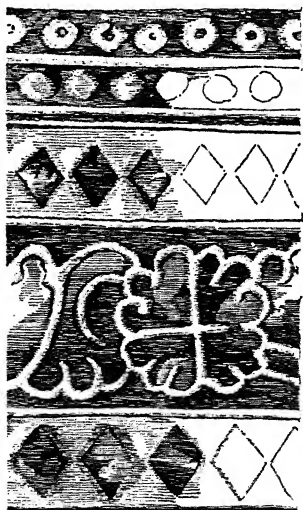
first the blower begins to roll it about on his slab to bring it into something like cylindrical shape; but it has none of the lightness of blown glass—and as a matter of fact it is not blown but worked in the red-hot glass upon a core of sand, afterwards removed.)

The colour of clay is commonly muddy, its texture gritty. Both of these shortcomings are made good by the simple process of coating the coarse dull body with finer and more brilliant clay. The condition is that the two clays shall be of equal shrinkage in the fire. Even the unequal contraction of the two and the consequent cracking of the outer skin have been turned to advantage, as in the “crackle” which gives interest and “quality” to Chinese celadon and other ware (135). A keen workman loses no hint his material may give him. An accident puts him on the track of new discovery. For the last few years the most expert of European potters have all been aiming at starry, crystalline effects on porcelain, like frozen breath upon a window pane. This was in the first instance the unexpected result of some-

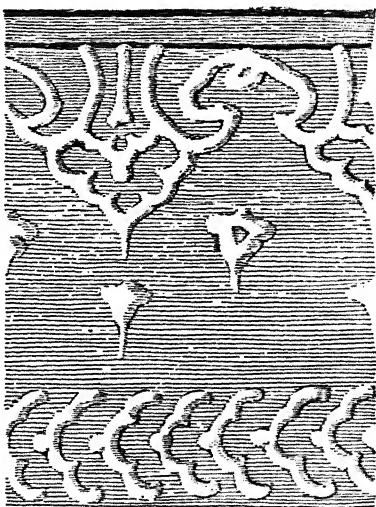
thing "going wrong" with the glaze. If a man can gain sufficient control over such accidents to make tolerably sure of the result, there is every reason why he should thus play with the glaze—making it, as it were, a partner in his venture.

Variety of colour is very simply got by scratching through the outer coat of fine white clay to the darker body of the ware beneath—and so in search of colour the potter stumbles, as it were, upon incised pattern. It is a means of decoration which could not fail to occur before long to the man who had once coated his vessel with clay of a colour different from that of the body.

Again, a glaze of transparent colour gives of itself occasion for pattern, for hollowing out recesses in which it will lie thick and dark, for raising up points from which it will flow and show lighter than elsewhere. The melon-like modelling



137. DETAIL OF PERSIAN
"SLIP" DECORATION.



138. DETAIL OF TURKISH
"SLIP" DECORATION.

of the Persian vessel on page 146, though not perhaps uninfluenced by beaten metal, is perfectly adapted to give value to the glaze with which it is coated.

The simplest and most characteristic means of raising ornament in pottery is by means of liquid clay, or slip as it is

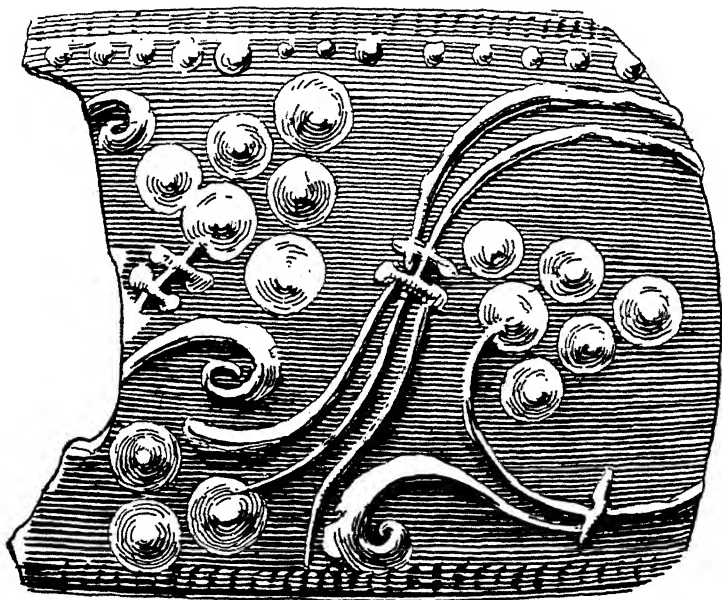


139. ROMAN "SLIP" DECORATION IN HIGH RELIEF.

called, of about the consistency of cream, which may be painted or dropped upon the body. There is something peculiarly interesting in the direct use of slip, where the touches of the brush and the drops of the liquid clay are left to tell their plain straightforward tale, no matter whether the workmanship is of the rough and ready kind which is often all that is to be desired (137), or carried to a point at which we wonder at the artist's control over a seemingly very limited resource. The examples illustrated (137-140) show progres-

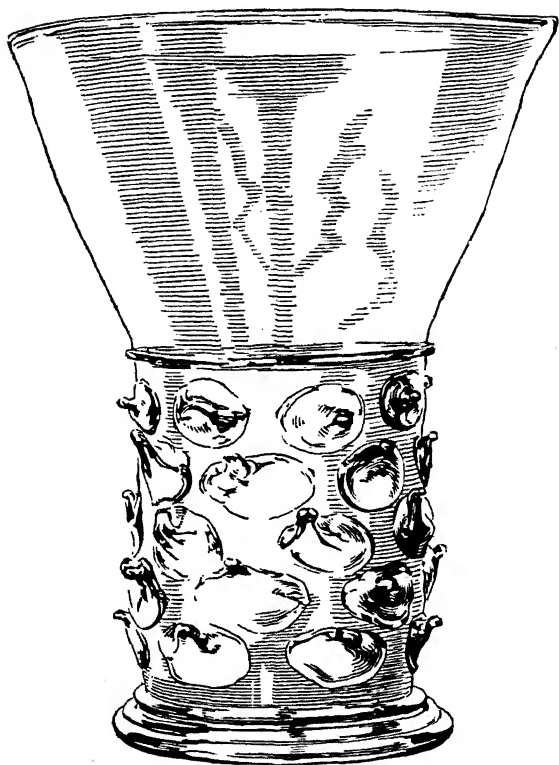
sive stages of the painter's mastery over the liquid clay—but they are one and all characteristically slip.

The likeness between this slip decoration and the "prunts" of the glass-blower (141) is too striking to be passed over. It looks as if the one must have been inspired by the other. That the one was influenced by the other there can be no



140. ROMAN SLIP DECORATION VERY DELICATELY MODELLED.

doubt: the glass-worker goes to work so nearly on the lines of the potter. But each was working in the direction of his art—the one in clay upon clay, the other in glass upon glass—and in either case the characteristic form seems to grow naturally out of the way of working. The very "prick" in the centre of the prunt comes almost as naturally from lifting the brush gently from the surface when the clay



141. GLASS DECORATED WITH "PRUNTS."

is in condition, as from withdrawing a rod of adhesive glass from the surface it has touched. The softening of the prunts, by submitting the glass once more to the oven, and melting them down (142), has very much the effect of comparatively sloppy clay which has sunk down to the ground.

One fortunate result of slip painting is that the relief so obtained can hardly be sufficient to interfere, as modelling easily may, with the form of the vessel it enriches, or to impair its usefulness. In this it resembles the similarly

restricted relief of repoussé ornament in metal. Ornament beaten up from the back or put on liquid with a brush, is with difficulty to be made so bold in relief or so detached from its ground as to appear like an excrescence upon it. The apotheosis of "slip painting" is the process known as *pâte sur pâte*, in which Mr Louis Solon is a master. It is really only slip that he employs, but the china clay is of the finest, allowing him by its transparency to give upon a dark

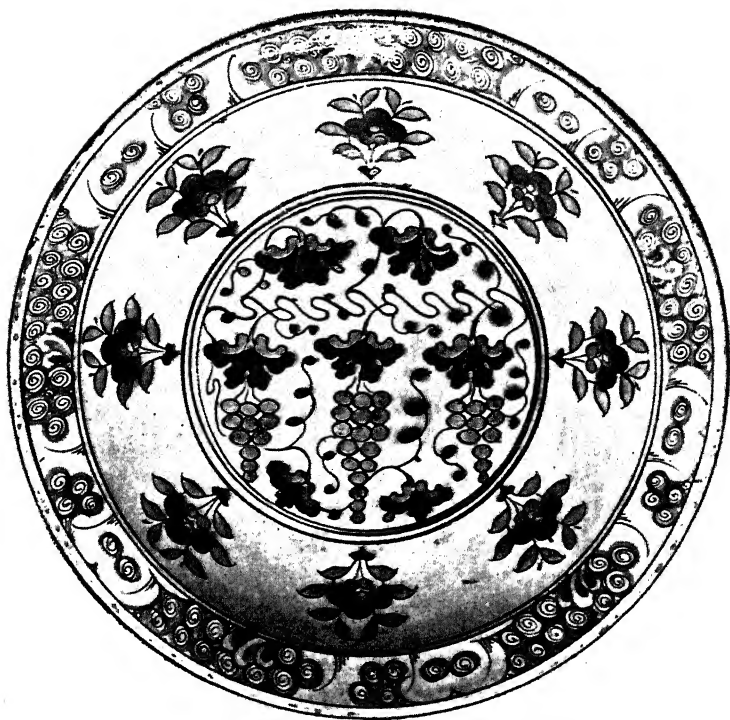


142. "PRUNTS" SOFTENED IN THE FIRE.

ground the most delicately modelled gradation. Mr Solon carries the process of which he is a master to the point where danger begins, but his sympathy with the clay keeps him straight. Consummate work of this exceptional kind, the direct outcome of a workmanlike process, is a kind of luxury in which here and there an artist—given the requisite mastery of his art—may indulge. The rule more generally applicable to workmanlike technique is spontaneous execution. "If it were done, when 'tis done, then 'twere well it were done



143. "PÂTE SUR PÂTE" DECORATION BY M. L. SOLON.



144. LIQUID-LOOKING POTTERY PAINTING.

quickly." This holds more than good with pottery painting, whether upon the unglazed "biscuit," which sucks up each separate brushful of colour as it is laid on, or upon the slippery glaze itself. In either case the artist gets, by floating-on his colour quickly, a juiciness which any subsequent niggling goes to destroy. There is a liquid quality in water-colour which the painter wishes only he could retain beyond the wet stage of his picture. This is just what the pottery painter gets as a matter of course by floating-on his colour with a full brush—and keeps (144). The on-glaze colour sinks (or should sink) into the glaze, the under-glaze colour floats up into it—

and is held there in suspension—hence the quality of “blue and white,” cobalt being the colour most sure to spread in this way, so that you see into it. Could anything be more ill advised than to give up this advantage inherent in the medium used? And yet, instead of securing a superlative result, easily within reach, European china painters persist in fidgeting and stippling with the brush, dabbing the colour with cotton wool, or laying on coat after coat until there is no trace of transparency in the triumphant evenness of colour. You will find sometimes a piece of old Worcester in which the blue ground is extraordinarily fine (there is one in the Jones Collection). Closer inquiry goes to show that it is only because the painter had not quite succeeded in his attempt to obliterate the natural transparency it should have been his first care to preserve.

There was reason for the reservation (above) as to on-glaze colour. It is only under the happiest conditions that it sinks into the glaze. More commonly it lies upon the surface, glossy indeed, but without the transparency of under-glaze colour. Why then resort to it? The only reason an expert pot painter has for so doing is to increase his palette—the fierce fire necessary to fuse the glaze burning away many of the colours he would like to use—and he has not the reticence to stop at the point suggested by the fire. Without denying an artist's right to use the means which give him what he wants, it may be remarked that the secret of ancient triumph is commonly in the restricted means of the workman, which compel him to simplicity; and that the failures of modern times are as commonly to be accounted for by the multitude of facilities, leading astray from it.

Where is the piece of Sévres or Dresden china to compare with a fine bit of Nankin blue and white porcelain? And so in earthenware the glory is all with Rhodian faience (144), Italian majolica, and Hispano-Moresque lustre (145), in which even when the painting was on the glaze, it was restricted



145. HISPANO-MORESQUE POTTERY PAINTING.

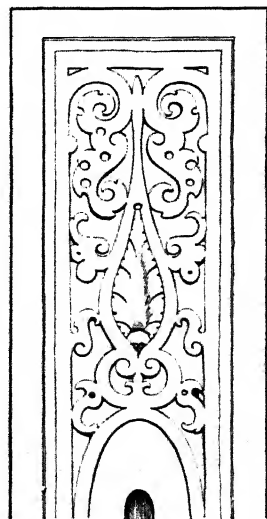
to a very limited palette. The beauties of colour and iridescence which lie, so to speak, in the crucible, are worth more than all the elaborate miniature painting of our European factories (the little Chinese on-glaze pictures were at least freely and spontaneously put in) marvels of skill but decoratively ineffective, even if the painter got what he wanted—which, presumably, he did not; for his work falls between the two platforms of decorative and pictorial effect. The starting point of a painter should be the qualities inherent in his medium (oil, distemper, fresco, encaustic, or whatever

it may be)—which he ought not to adopt without first asking himself whether it is the one fit for his purpose. Having adopted it let him respect it, and regulate his aim according to his appliances. Let the pottery painter think out a scheme of colour his palette will allow him to realise. The oxides at his service will deprive him of possible indulgence in natural effects, but will lead him in the main to results more perfect in their decorative way than he could ever get by disregarding the nature of vitreous colour, in no case independent of the uncertain action of the fire upon it. That alone should be enough to keep him from entertaining the idea of colour depending upon precisely accurate tones or tints. The one thing certain about colour that has to pass through the fire is its uncertainty in the kiln. Pity as we may the sorrows of the poor pot-painter whose ambition is all in opposition to his craft, we cannot hold him blameless for his misfortunes: his plain remedy is to abandon a medium for which he has no sympathy, and to adopt one in which he can express himself, if not with ease, without for ever breaking his heart over it.

VIII. WHERE TO STOP (*Continued*).

“Grounding out” (the first step in carving) suggests filling in, *i.e.*, inlay—Inlay suggests engraving, to get finer detail—Outlines of cement in marble inlay—Couched cord or stitching in appliqué embroidery—Smith’s work—Spiral scrolls easily forged—Terminal ornament beaten into swages—Chiselled ornament—Threaded bars—Cut and hammered plates—Pierced iron—Armourer’s work.

POTTERY is no exceptional instance of how material or method points the way, and leads on, stage by stage, from one process to another, between each of which is a convenient halting place. The first step of the carver is to “ground out” his pattern, and the mere cutting away of the ground, so as to leave a pattern in slight relief upon it, the texture of which is naturally not so smooth as the original surface of the plank, is quite enough for some simple purposes of decoration. The panel illustrated (146), which is in its way quite satisfactory door decoration, goes very little beyond that. Time intensifies the difference between ground and pattern, as the hollows catch the dust and the face of the wood gets polished by use. This is seen to be an advantage, and the desire arises to anticipate this



146. WOOD CARVING
LITTLE MORE THAN
“GROUNDED OUT.”

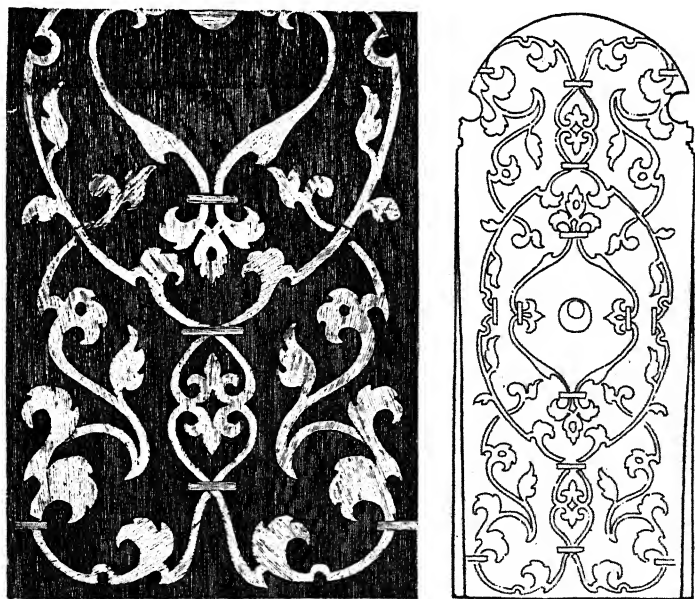


147. WOOD GROUNDED OUT AND FILLED IN WITH COLOURED MASTIC.

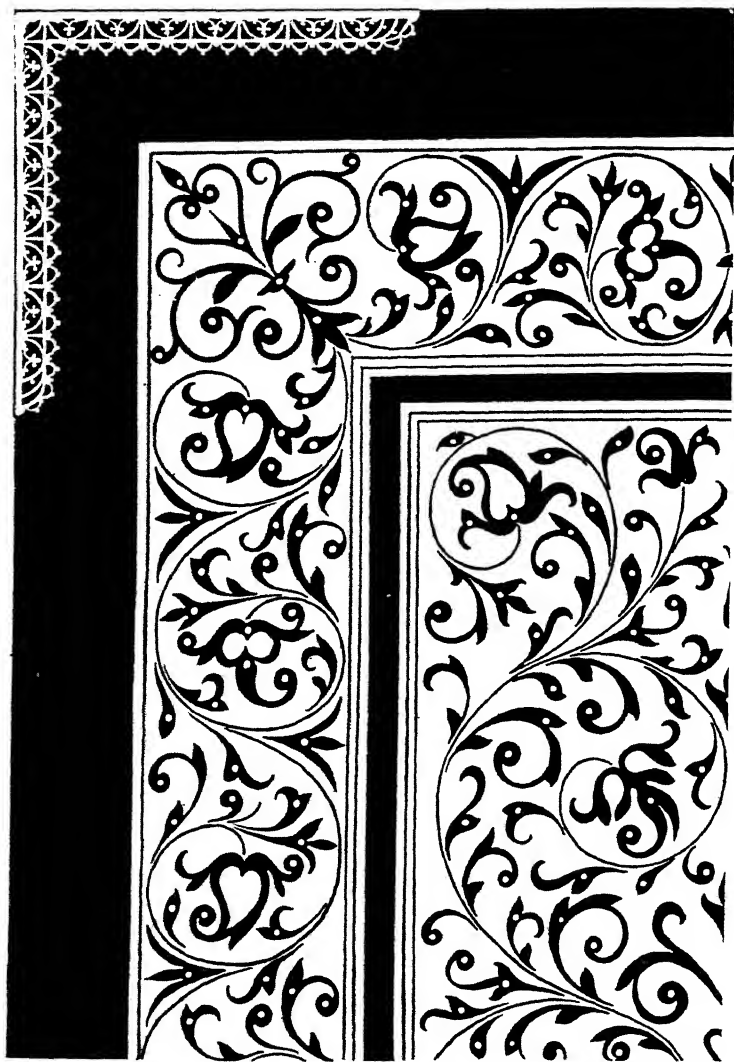
stronger contrast between the pattern and its background. The carvers of the fanciful Italian cypress chests of the fifteenth century did that by filling in the ground with a cement or mastic, which at the same time gave them colour—though in the example given above very little of it remains to this day to bear witness to the fact. From that to the inlaying of different coloured wood is a step the worker could hardly fail to take, though, in view of the labour involved in scooping out the hollows to receive it, he naturally inlaid the pattern (148) and not the ground. In the case especially of very hard

wood like ebony (as of ivory also) it was thought advisable to peg down the inlay lest the glue should not hold, and the Portuguese inlayer had the wit to make use of the pins employed for this purpose to enliven his pattern (149). They are in this case ivory attaching ebony inlay to a golden brown ground, and tell out in the work itself more plainly than in the illustration. But even before one realises the use of the little white dots one appreciates the sparkle which they give to the ornament.

Flat ornament is a point at which clearly it is convenient for the inlayer to stop. That restricts him, of course, to pattern work, and in pattern work it is not often necessary to go much further. Design more ambitious leads to the introduction of another process, engraving, the effect of which is



148. DETAIL OF WOOD INLAY AND PLAN OF COMPLETE PANEL.



149. WOOD INLAY SECURED BY IVORY PINS WHICH FORM
PART OF THE DESIGN.

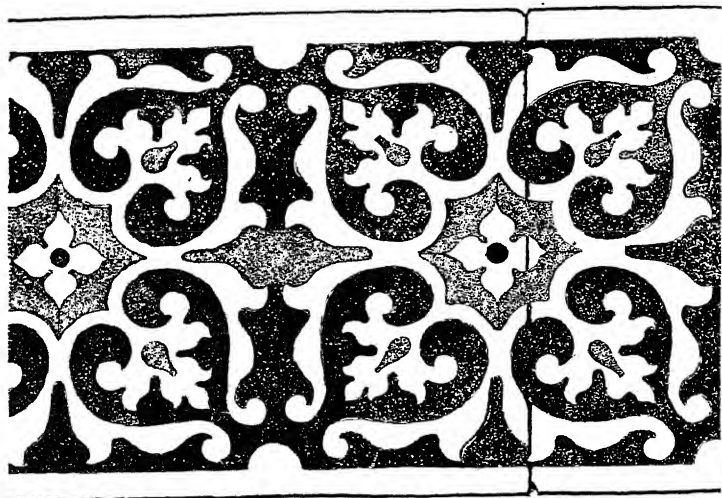


150. IVORY INLAID INTO WOOD, AND ENGRAVED.

happier in ivory or box than upon wood of a more open grain. In the casket panel above the German artist makes good use of engraving—which there is always a danger of carrying too far.

Very nearly the same stages of development occur in marble inlay. The first stage is the grounding out of slabs of white marble and inlaying marble of different colours, as

in the detail from the façade of the duomo at Florence (151). The second is the addition of detail engraved or grounded out and filled in with cement—which has its value also in softening the contrast between black and white marble—as in the ornamental border from the pavement of the cathedral at Siena (152), and again in the figure subjects enclosed by such borders. It is a great descent in taste from that to the later practice of Beccafumi (in the same pavement), who not only



151. COLOURED MARBLES INLAID INTO WHITE.

made use of cement lines for giving modelling to his figures but inlaid his cast shadows in shades of grey marble, as may be seen in the detail opposite (153), a striking example of what not to do in inlay, and least of all in a pavement. Analogous to the outline of grey cement in marble inlay is the stitched outline sewing down the onlay in appliqué embroidery. The Indian leather-worker stops discreetly at that point (154). In silk or velvet the actual sewing down is usually masked by couched lines of cord or filosel or gold thread. In appliqué



152. MARBLE INLAY WITH ENGRAVED DETAIL FILLED IN WITH CEMENT.

figure embroidery (155) the stitched outline becomes (like the engraving on ivory, page 161, and the cement in marble inlay above) further necessary, on the surface of the silk, to give the features of the face, the folds of drapery, the feathering of



153. MARBLE INLAY AIMING AT EFFECTS OF LIGHT AND SHADE.



154. LEATHER ONLAY WITH STITCHED OUTLINE.

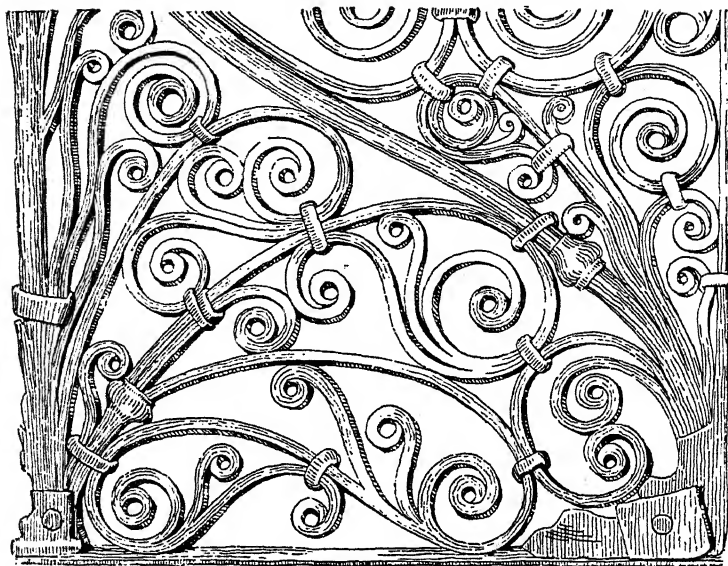
wings, and other such detail. It is possible, as Mr and Mrs Dawson's angel shows, to do this and yet to keep well within the bounds of decorative treatment. Mr Dawson's design compares in this respect with the figure work of the earlier period in the Siena pavement above referred to (3). This particular piece of embroidery illustrates yet another step in onlay. The design is here not onlaid on to a ground of coloured silk; figure and ground alike are sewn down on to a foundation of linen or whatever it may be; it is in fact patchwork, a stage beyond appliqué embroidery in the accepted sense, but one at which the onlayer is sure in the end to arrive.

One more instance will be enough, as we shall approach this subject again presently from another side. The design of Early Mediæval ironwork shows plainly enough in its design the stages of its development. The architect of the twelfth or thirteenth century did not protect the windows of his house or screen off the chapels of his church with straight iron bars, as we should do, for the simple reason that a straight bar, which is about the easiest thing to make in iron by modern mechanical means, was one of the most difficult for

the smith to forge. It was comparatively easy to him, and a thing in itself amusing, to hammer his rods into spiral scrolls; and he indulged in spiral scollery to his heart's content—often literally contenting himself with not much more than

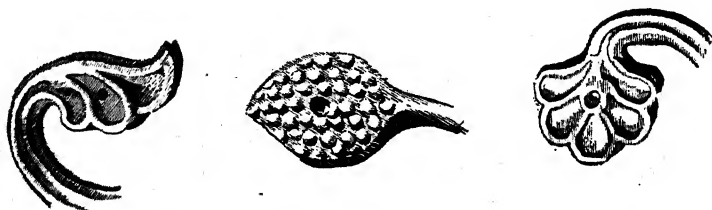


155. SILK PATCHWORK BY MR AND MRS R. A. DAWSON.

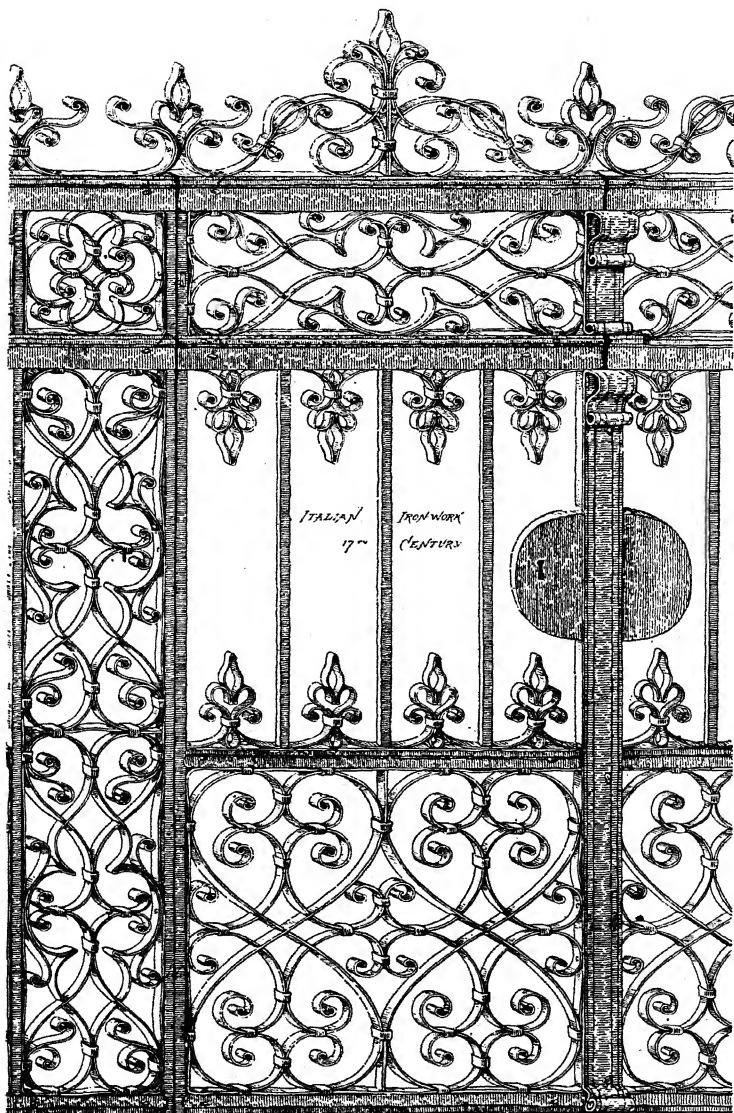


156. FORGED IRON SCROLLWORK OF THE THIRTEENTH CENTURY.

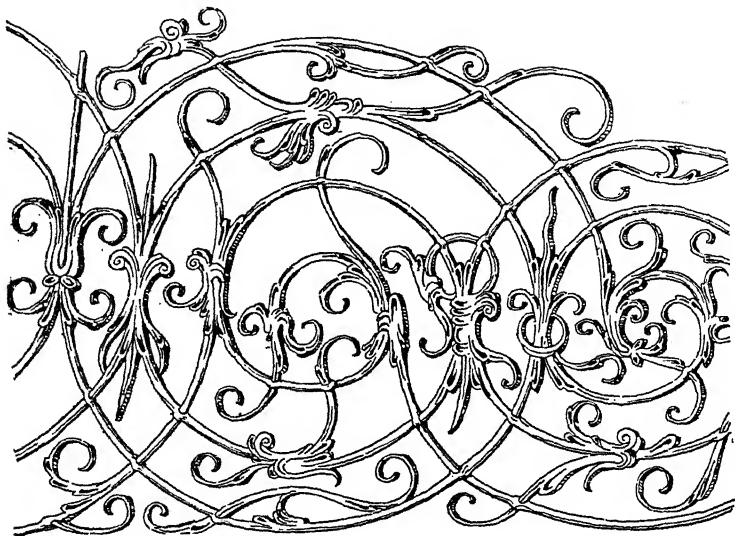
that. Welding them together he got as in the French grille illustrated (156) a satisfactory suggestion of growth. But he did not always stop there. By beating out the ends of his branches to the size he wanted, and hammering the red-hot iron into hard steel dies (swages is the technical term for them) much as wax is pressed into an intaglio to give an impression in relief, he shaped them into leaves, berries, or



157. DETAILS OF FORGED IRON BEATEN IN "SWAGES."



158. FORGED IRON SCROLLWORK OF THE SEVENTEENTH CENTURY.

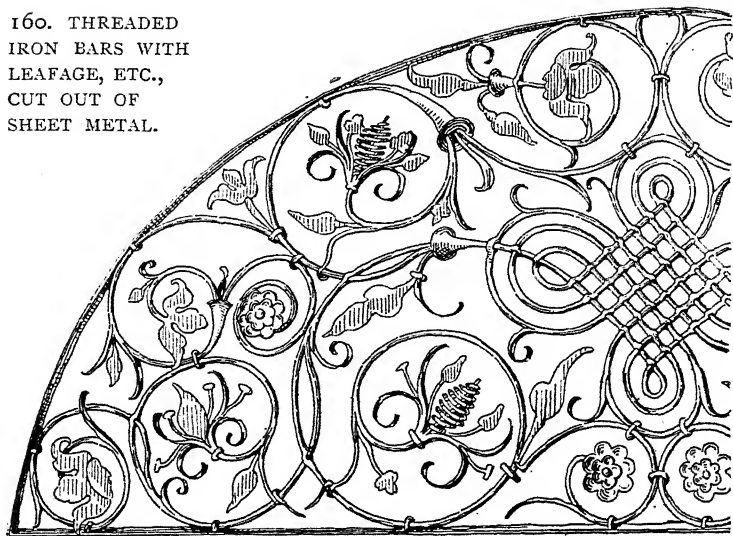


159. FORGED AND CHISELLED IRONWORK.

rosettes, such as those on page 166. There was never much danger of bars wrought on the anvil having anything like the mechanical effect of our machine-made strips; but the smith would sometimes (it occurs at Le Puy) punch little circular depressions in the thickness of the bar, thus giving the profile a subtly waved appearance; or he would notch the sides of the bars at short intervals (this is done at Palermo) to give serration.

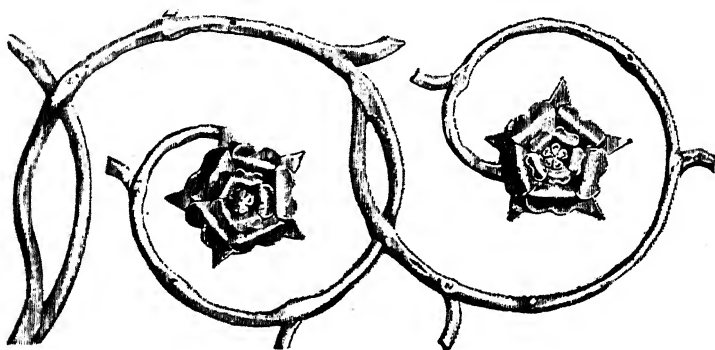
It may be mentioned in support of what was said above, as to the dependence of historic forms of ornament quite as much upon technical as upon local or national conditions, that even as late as the seventeenth century the Italian smith worked very much on the principle of four or five hundred years before. His straps, as shown on page 167, are thinner than the Gothic workman's, he thinks more of graceful line than of energetic growth—that is of his time and

160. THREADED
IRON BARS WITH
LEAFAGE, ETC.,
CUT OUT OF
SHEET METAL.



country—but his craft leads him to employ in his own way the very same device of curling straps, welded together or tied with separate straps of iron: in either case the forms of the design are not merely those of the thirteenth or the seventeenth century, but very largely those of the forge. Foliation takes in early Renaissance ironwork comparatively flowing form, still of a distinctly scrolly character, but no longer beaten into swages but chiselled. A good step forward is to be noted in the direction of freedom. An interesting feature in this German work is the interpenetration of the stems, by which of course the work is strengthened. They are sometimes, as in the Nuremburg grille above, closely matted together. This threading of the bars is not so simple a matter as it looks. It is in fact not so much an outcome of the way of working as a cunning overcoming of a difficulty. The bar which runs through is in reality made up of a number of short lengths forged together after each successive threading. It is plain when you think of it that a long iron bar could not

be kept at a temperature which would enable it to be drawn at once, like a thread, through half-a-dozen eyes. The detail of a Nuremburg scroll marks yet another process of workmanship, the welding on of leaves and other features cut out of sheet iron (as may be seen most plainly in the flowers) and modelled with the hammer. The portion of a hinge below shows in the flowers no less than three of these hammered plates fastened together with a central five-petalled rivet. In

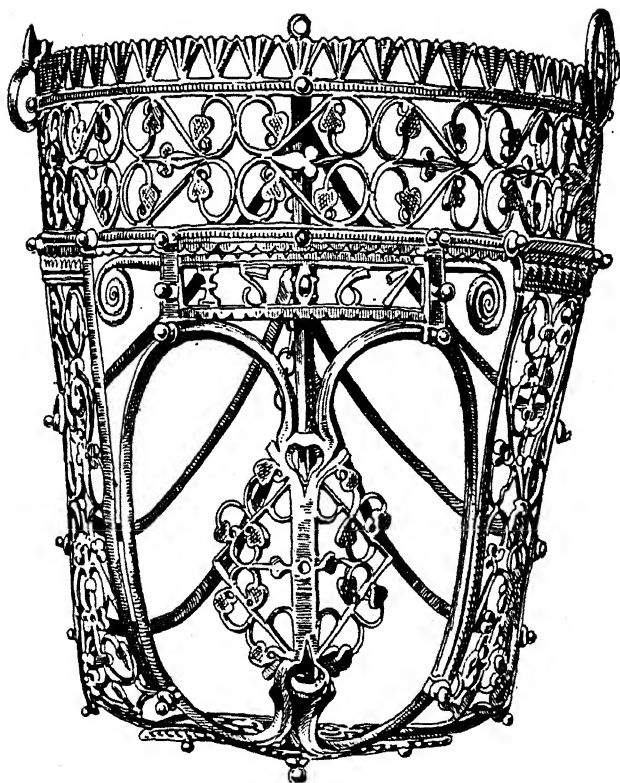


161. FLOWERS BUILT UP OF SHAPED AND EMBOSSED PLATES OF IRON.

late Gothic work conventional leafage cut in this way out of flat iron was curled up into the most luxuriantly florid and at times uncomfortably bristling ornament.

The severe and well-knit ornament in the horse muzzle opposite tells of quite another procedure, the chiselling of cold iron or steel—armourer's, no longer blacksmith's work—a process which does not invite excess. The forms are in some respects reminiscent of hammering; but the more they are examined the more evident it is that they are produced by piercing—fretted (see Chapter XI.) out of the solid, and engraved on the surface.

A smith who has it in him to strike out in a direction of his own will always put his mark upon his work. It is so



162. CHISELLED IRON.

that successive schools of workmanship were formed. The "local" style was always the harvest of some one man's sowing; but, in the case of blacksmith's work, it bears also the marks of the forge, of hammer, shears, and pincers, each of which in turn helps to shape it; and when the smith gives way to the armourer or locksmith the style of his design tells of the change.

IX. MORE THAN ENOUGH.

Aboriginal fidgetting gives rise to pictorial art and ornamental, to the scratching of the caveman and the notching of the South Sea islander—Profusion of savage and of oriental ornament—More sparing use of modern Western ornament—Plain surfaces in contrast to enrichment—Strapwork, Oriental, French Renaissance, Gothic, Byzantine—Cartouche work—Reticent enrichment.

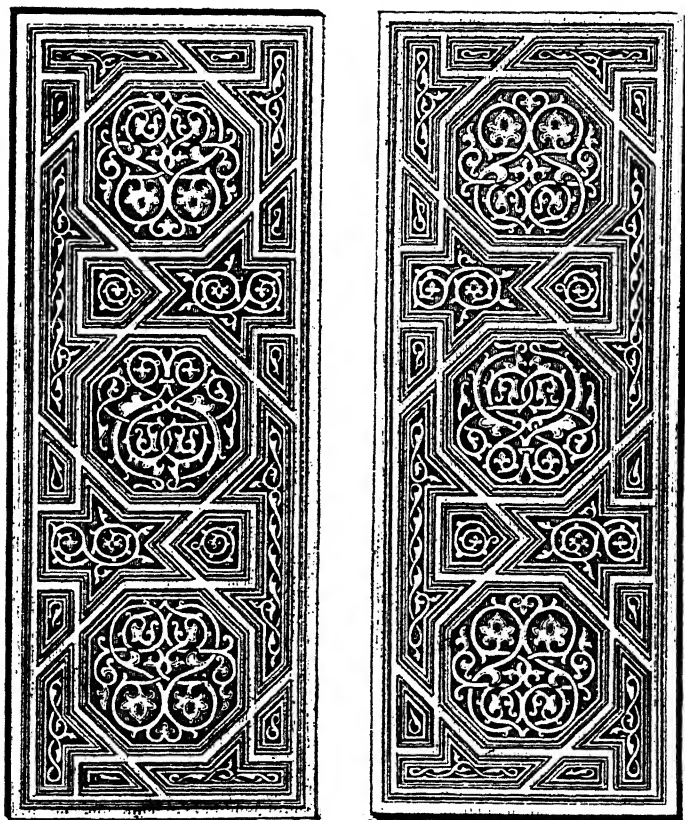
THE very need of ornament arises out of a certain innate discontent with plain smooth surfaces—out of the natural irritability of man, who cannot, it seems, keep his hands, let us not say from “picking and stealing,” but from fidgetting with something.

The artist belongs by temperament to the irritable race of poets. But give any “human boy” a knife and he will begin to notch something, give him a sharp-pointed instrument and he will scratch the nearest smooth surface with it.

No wonder, then, that mankind did the same, that the caveman scratched the bones strewn about his haunt, that the South Sea savage notched the handle of his axe. As it happens, the aboriginal forms of fidgetting hint at the two directions in which artistic ingenuity has since developed itself; the caveman scratched the likeness of a mammoth or some other living thing, the islander evolved by notching forms of ornament not to us at all events suggesting life or nature. It is with this more ornamental development of design that we have to do. Pictorial art is not our story. The leisure of the savage accounts for the profusion of his

ornament. In the intervals of hunting and fighting he had nothing else to do, and so he went on whittling away at the handle of his club, until he had occasion to knock some one on the head with it.

In countries where it has not yet been discovered that time is money, and life flows lazily along, a similar profusion of enrichment is everywhere the custom. But in proportion



163. GEOMETRIC STRAPWORK RELIEVED AGAINST MORE FLOWING ORNAMENT.

to the culture of the people there is order in the intricate maze of their design, restraint in the seeming wild luxuriance of its detail.

Our Western habit is to contrast always enrichment with plain surface, as a foil to it; and, at its best, a rather conspicuous self-restraint gives dignity to our art. The oriental instinct is rather to cover a surface with ornament, in which, nevertheless, for all the minute elaboration of its detail,



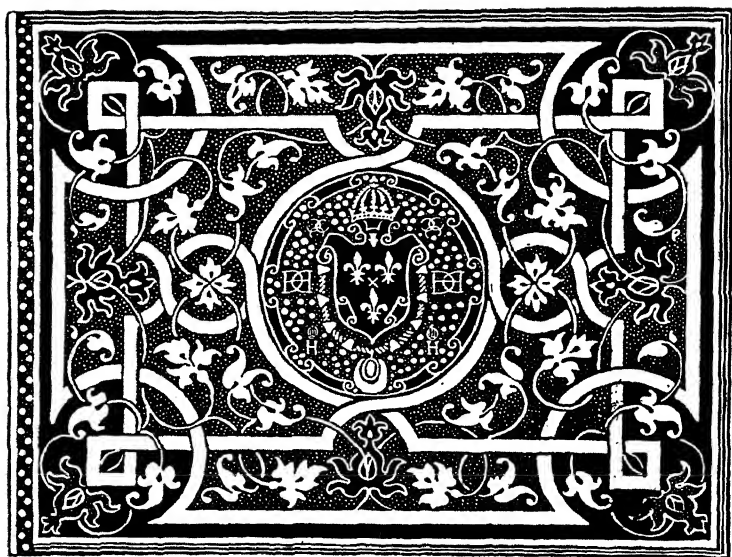
164. ARAB CANDLESTICK—BRONZE ENCRUSTED WITH SILVER—
FIFTEENTH CENTURY.



165. A TRIPLE SCHEME OF ORNAMENT.

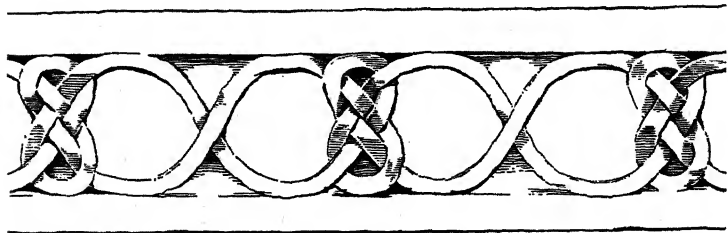
certain more emphatic forms distinguish themselves—at the right distance from the eye (163). It is anything but the meaningless elaboration which it may appear to the casual observer.

Excess is not easily pardonable in ornament. Those, however, who look coldly on ornament generally are much too ready with the condemnation “overloaded with ornament.” Ornament may be extremely rich and yet not “overloaded.” Our northern temperament puts us too much out of sympathy with the exuberance of oriental ornament to do justice to the art with which an Eastern artificer will use

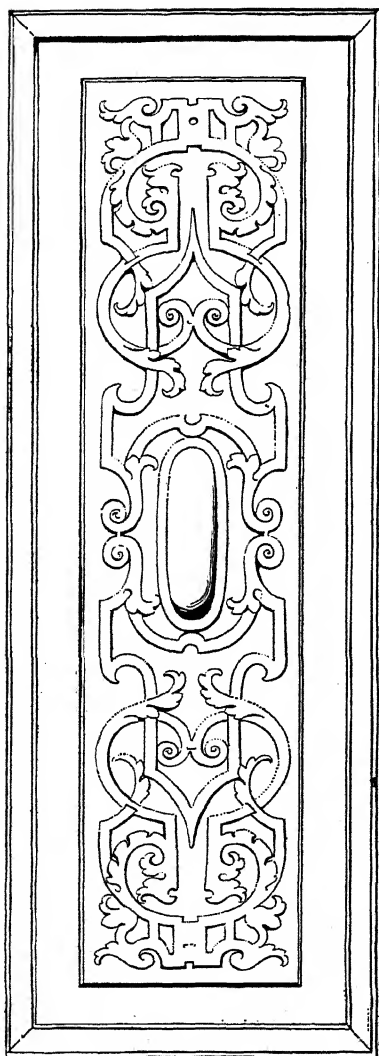


166. HENRI II. STRAPWORK DESIGN DERIVED FROM ORIENTAL INTERLACING.

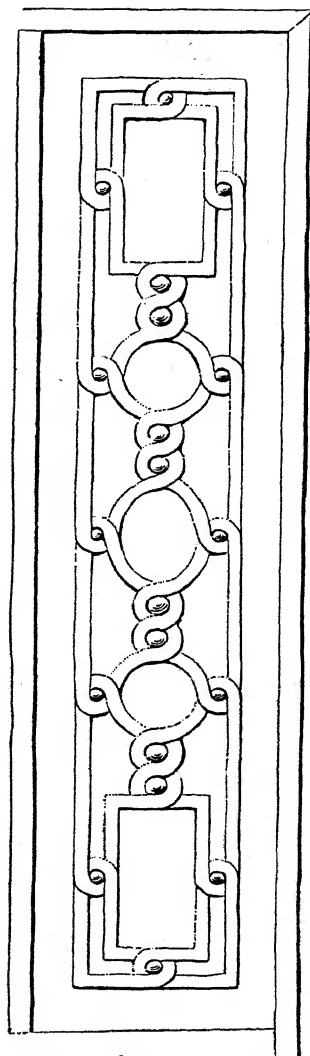
ornament as a foil to ornament, relieving his arabesque not by plain ground but by other ornament—elaborate mouldings perhaps (where we should use plain framing) or lettering only less ornamental than the damascening all about it (164). Redundancy is not with him, as with us, a sign of inex-



167. FLAT STRAPWORK IN WOOD CARVING.



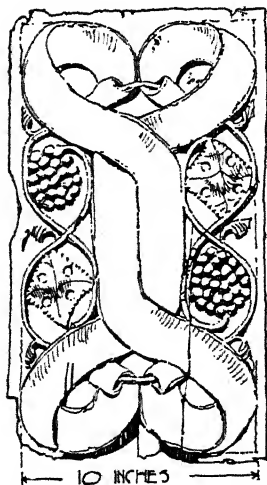
168. FOLIATED STRAPWORK.



169. STRAPWORK AND CIRCULAR
BOSSSES.

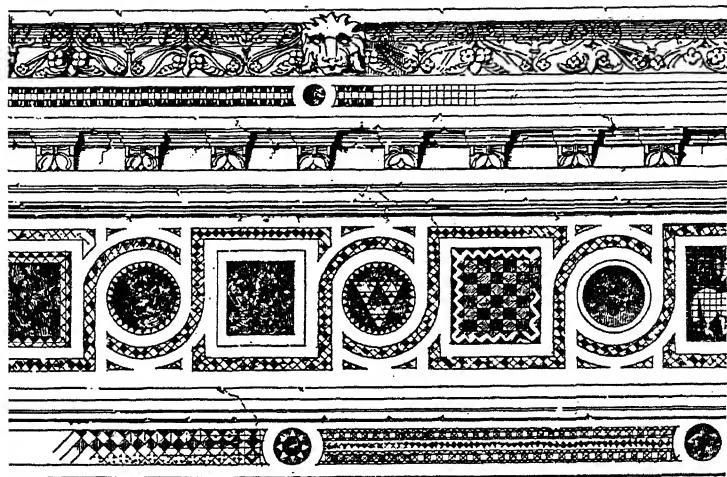
perience of deficient culture. And he is surely not the lesser artist in that it is as easy for him to handle a triple scheme of pattern as for us to manipulate a single thread of design. In the plaster enrichment on page 175 the broad interlacing strapwork is discreetly contrasted with ornament more suggestive of growth; and that, again, is broken up with pattern on a smaller scale "inhabiting" its broader surfaces. Our liking for more sparing use of ornament is not so much a sign of finer taste on our part as of a different temperament. It is more a question of feeling than of judgment, more of race than of art.

A Western artist works, and must work, according to his Western bias. But he may learn, and in the past has learnt, many a lesson from the East. The notion, for instance, of interlacing strapwork has stood him in wonderfully good stead. The gorgeously tooled and inlaid leather bindings of the *Henri-deux* period proclaim aloud their oriental origin (166) both in the forms of the foliated detail and in the way the strapwork is employed. The use of strapwork is to be observed again in the binding on page 107, and shows itself no less appropriate to cut leather than to inlay.



170. GOTHIC STRAPWORK.

The wood carvers of the Renaissance employed strapwork in such a way as at the slightest cost of carving to give value to the wood, and at the same time to preserve the characteristic flatness of a door panel frieze or whatever it might be (169). The mere difference of surface between flat strapwork (such as we find in English Elizabethan or Jacobean carving—very suggestive sometimes of fretwork) and its slightly sunk



171. BYZANTINE STRAPWORK.

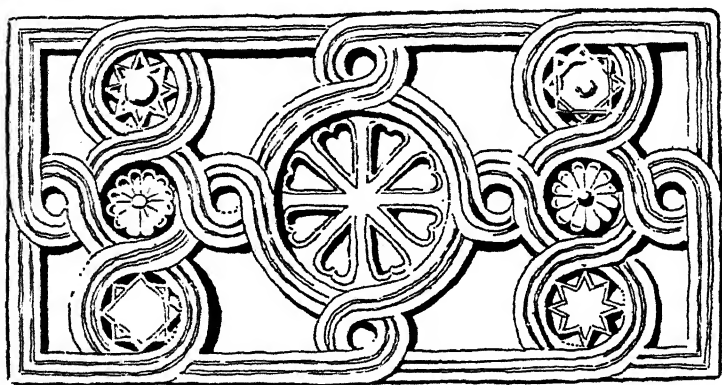
ground, goes for something. The French carvers, however, by the very slightest variation in the surface of the straps, inclining them now to this side now to that, and making them dip one under the other (167), gave life to this most arbitrary form of ornament, even without the slight foliation of the straps (168) which somewhat lessened the difficulty of the problem of design. It is not so easy as it seems to design a simple strapwork pattern like that to the right on page 177.

In Gothic work the strap takes more the form of ribbon curling over at the ends, as in the panel on page 178, where it contrasts at once with the flat ground and with the richer carving of grapes and vine leaves.

Workers in gold and silver found in strapwork a means of decoration perfectly suited to their method of work. It was relieved from the ground by its surface and texture, and yet in its turn subordinate to richly embossed arabesque or bunches of natural fruit and foliage.

Strapwork of white marble forms again the framework

absolutely necessary to the effect of *Opus Alexandrinum* and the minute mosaic designed by the *Cosmati* in emulation of Byzantine workmanship (171). In Byzantine carving the strapwork was sometimes itself moulded to give it a texture distinguishing it both from the plain ground and from the richer bosses of ornament contrasted with that (172). It abounds in Romanesque stone carving. It is the main element in Scandinavian design. Further use of strapwork in ornament will occur to every one. It has been dwelt upon so far only to indicate how the simplest device may run through



172. MOULDED STRAPWORK.

the design of periods and countries wide apart, and to show how kindly it will sometimes adapt itself to crafts as different as inlay from carving, as carving from embossing.

In this connection it should be mentioned that the cartouche work which is so typical of ornament of the late sixteenth and seventeenth centuries (107) is only a development of strapwork. It is not in itself a feature of much interest, and it was abused beyond endurance, but it offers a simple means of obtaining great variety of relatively plain surface—a thing sometimes very much to be desired in

beautiful wood or metal or whatever material is worth showing—and by no means easy to get.

The proportion of ornament to plain surface is, then, partly a question of East and West, partly of the material whose surface may or may not be worth preserving. We are led astray from our national sparingness of enrichment by facilities of too easy production. Unhappily, too, ornament is a very convenient cloak for the many sins of manufacture. Were it not for these considerations, economy (which is supposed to rule the day) would be for once on the side of art and keep us in the way of reticence. Luxurious ornament is no sin against good taste—only it is more difficult to restrain than coldly calculated enrichment. The normal taste is towards a preponderance of lean; some like more fat; a few have appetites not to be cloyed by any surfeit of richness—if only they can digest it! The artist should know how far he can safely go in the indulgence of his appetite for ornament. Enough is all the feast for him. If he has any doubt, let him be advised to use as little as possible, he should design that little all the better that he has no more of it to do. And enough is reached sooner than we think. The man who hesitates as to whether he has reached it, has very possibly overshot the mark already. In any case the danger of too great restraint is as nothing in comparison with that of excess. Unless he is confident that further enrichment is wanted it will be safe to conclude that he has indulged already if not in too much ornament in quite ornament enough.

X. FROM PROCESS TO PROCESS.

Scratched ornament on clay—Picked out pattern in paint upon pottery or glass or gilding—Colour rubbed into incised lines—Patterns impressed in plaster and painted or enamelled—From incising to inlay, to niello, to damascening, to enamel—Champlevé and cloisonné enamel—The relation of ivory, etc., inlaid with precious stones, to champlevé, and of mosaic of encloisoned jewels to cloisonné enamel—Enamel in relation to goldsmith's work—Various kinds of enamel.

IT is not for a moment suggested that, convenient as it may be to have halting places on the road, the course of design should be hindered in its development or stopped short. All that is urged is that it may be as well not to go on blindly, but to pause from time to time, and ask oneself what is to be gained—whether something may not be lost—by going further. There is not much fear of holding back the artist by such advice. He is by temperament not of the easily contented sort. And, as will have been seen, one process has a way of leading on to another, and by such gradual succession that progress is inevitable: the artist finds himself across the border of a neighbouring process before he is so much as aware that he is trespassing.

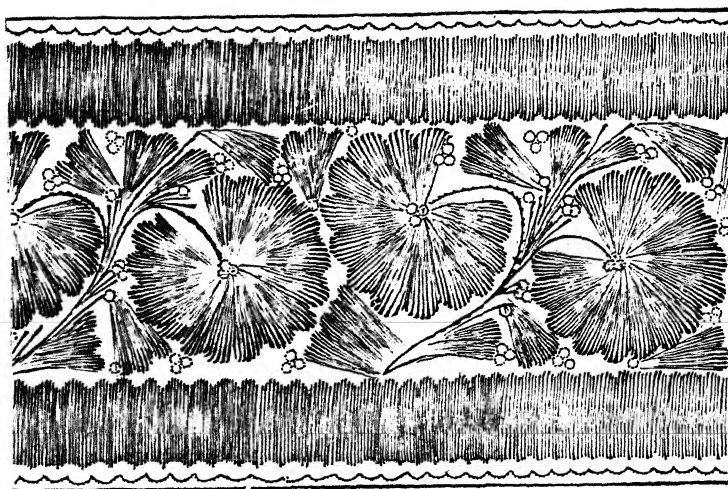
The simple device of scratching on wet clay with a point—practised by the first savage who ever thought of ornamenting his rude pottery, of digging into it with a knife, or otherwise impressing it (as the Assyrians did when they dug the cuneiform inscriptions into their written tablets)—gives us the art of *sggraffito*. But the simple process of scraping out ornament goes much further than is commonly supposed. A



173. PERSIAN EARTHENWARE WITH DIAPER PICKED OUT
OF THE LUSTRED GROUND.

painter has been known to expatiate upon the delicacy of the painted ornament on a gilt frame, when as a matter of fact the surface of the gold had simply been covered with a coat of paint and the pattern picked out of it with a point. So the glass painter picks out diaper work on glass coated with opaque pigment, and the potter out of colour or lustre upon the smooth glaze of his earthenware. The scribbled background of the white ornament filling up the space between the raised letters on the Persian tile above is filigreed over with a pattern of white showing through the lustre.

Characteristically scratched ornament occurs on a stone-ware pot (174) done with a little comb by means of which a number of scratches could be given at a single stroke. The



174. SCRATCHED STONEWARE.

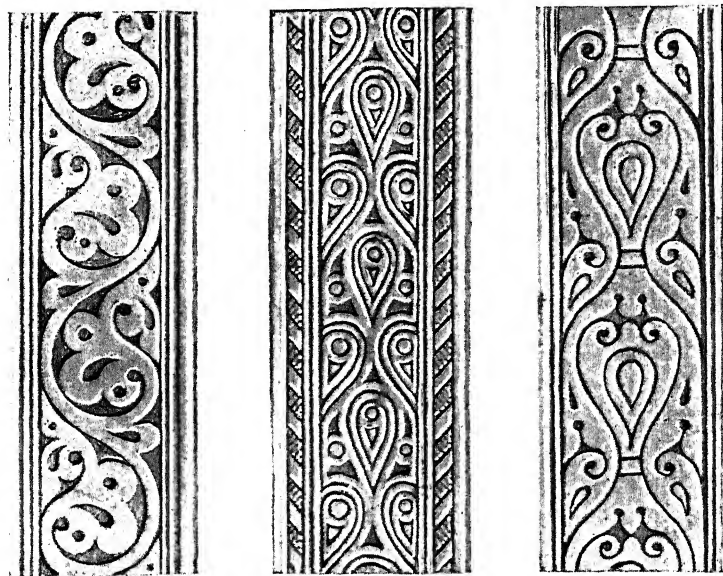
jagged lines of the stalk in the illustration show the difficulty of scratching curved lines cleanly on comparatively dry clay. The method of scraping through a coat of clay to a ground of different colour has already been mentioned. The worker in

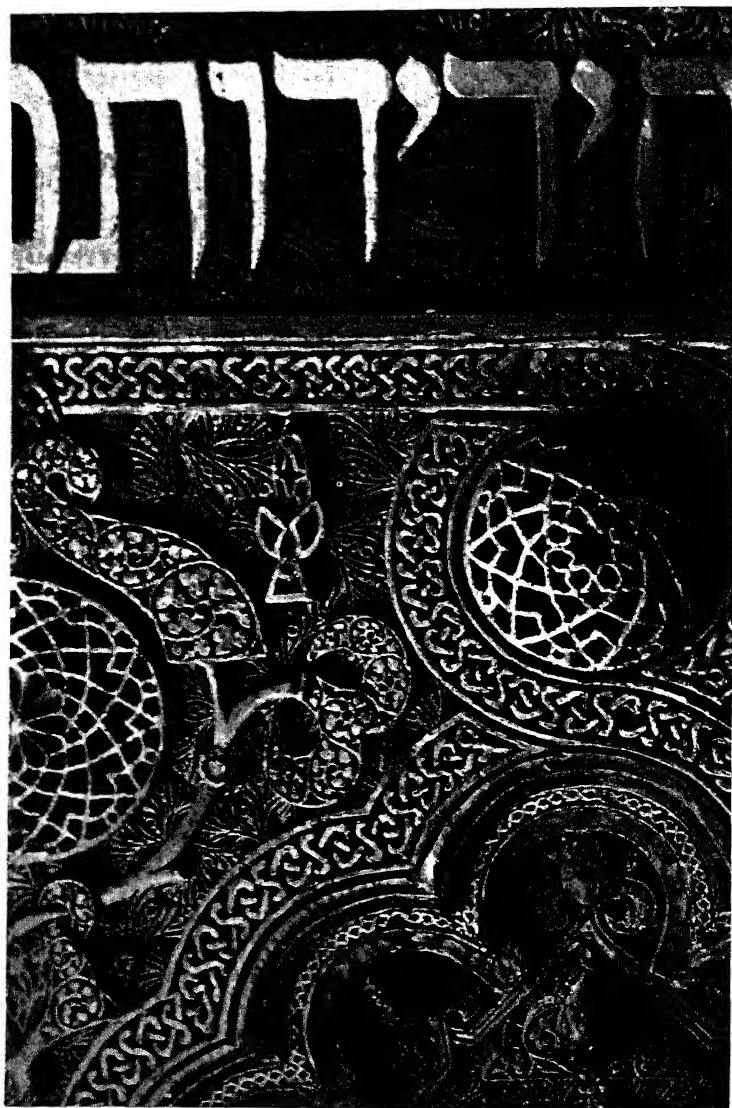


175. SGRAFFITTO

EARTHENWARE.

sgraffitto goes sometimes further than that, and lays a ground now of this colour and now of that, so that he can cut through

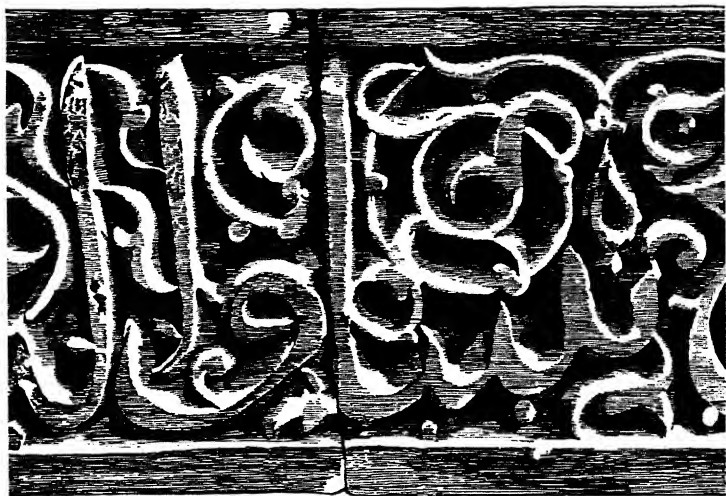




177. IMPRESSED AND PAINTED PLASTER.

the surface coat to the colour he wants for his design ; but he must make up his mind betimes as to the plan of his colour.

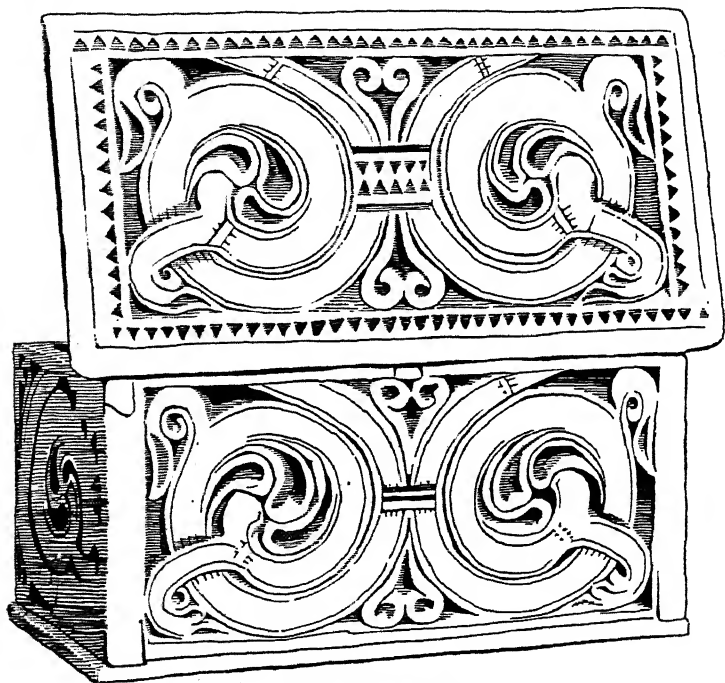
An alternative to the use of a coloured ground is to rub colour into sunk lines. It is easily wiped off the surface. The patterns on page 185 have all the character of having been incised on wet plaster : the lines are just such as the tool would take. Eventually designs like that would come to be impressed upon the plaster more or less mechanically.



178. DEEPLY CUT SANDSTONE GLAZED WITH VITREOUS ENAMEL.

But with the facility of so doing we get without fail more elaborate pattern work, such as the intricate diapering upon the upper walls of the Alhambra. The example opposite is from the synagogue at Toledo. Much of this Moorish plaster work is so sharp that the workman seems in some cases to have trimmed it with a knife ; but, even without that further manipulation, the work is clean and crisp enough for all decorative purposes—the more especially as it was

intended to be coloured. It is interesting to compare it with the kindred Persian work on page 187, deep cut, apparently, in clay, and glazed with vitreous enamel. The slabs prove, however, to be of soft sandstone which has been enamelled and fired. This cutting into a harder substance recalls the simple cutting with a knife into soft wood, a common Scandinavian



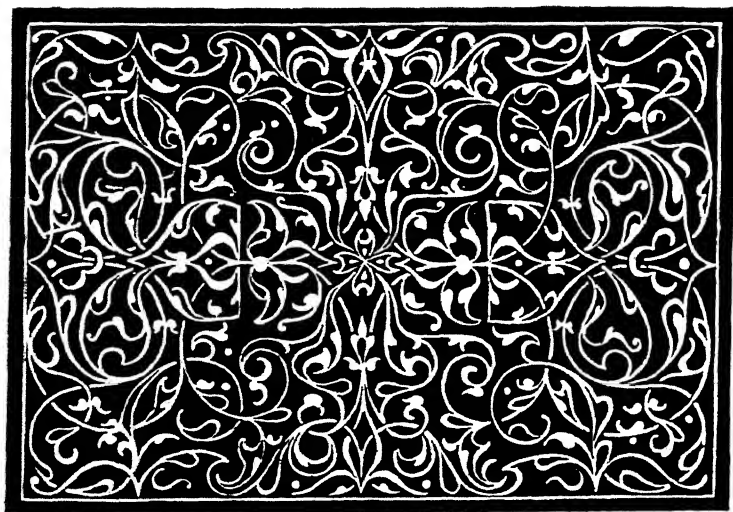
179. KNIFEWORK.

practice, illustrated in the Icelandic box above. The folded leafage in the heart of the spiral is here ingeniously made to take the place of background; and how cleverly the design is contrived to leave as little ground as possible, so that by far the greater proportion of the flat surface of the wood remains intact.

It has been shown (Chapter VIII.) how incising led to inlay in wood and stone. The same thing follows in metal. The bright pattern, for instance, on a black ground, which goes by the name of "niello," is forced upon the engraver. It comes about naturally. A design such as that upon the goblet opposite would show up at best indistinctly upon an engraved ground; but oxidisation would soon blacken it, and if it were deeply enough sunk, when the cup was polished the ornament would tell out so effectively as to point the way to this new development of the engraver's art. What more natural than to fill in the ground with an amalgam of quicksilver, copper, lead, and sulphur, which at a sufficient heat is perfectly fused to it, and presents a surface at once black and smooth



180. NIELLO.

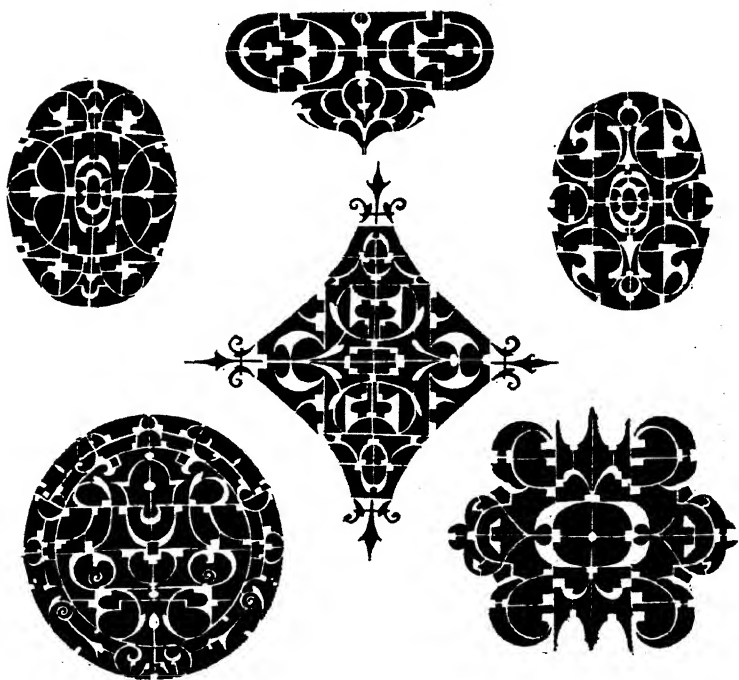


181. NIELLO OR DAMASCENING DESIGN.



182.
ENGRAVED
BRASS

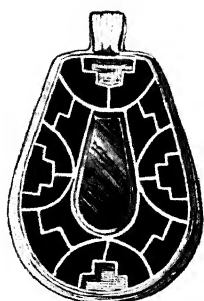
WITH
BLACKENED
GROUND.



183. DESIGNS FOR CHAMPLEVÉ ENAMEL.

to the touch? A similar effect is arrived at from the other side by damascening—engraving the pattern, that is to say, in iron or steel, and beating into the channels thus prepared for it silver or gold wire telling bright against the relatively black ground. The design on the opposite page was probably made for damascening; but it would serve equally for niello, except that in it no advantage is taken of the opportunity of leaving broader masses of bright metal to contrast with the finer filigree, as the strapwork does in the pattern on the German goblet.

Analogous to damascening is the process employed in Indian *Bidri* ware, where a black amalgam forms the ground



184. GARNET INLAY
—CLOISONNÉ.

into which silver is inlaid. The use of a black varnish or other such filling as a background to engraved brass (182) (as we fill in the background to a memorial tablet) is a less thorough way of getting the desired effect; but, apart from its liability to lose its hold of the metal, and its unpleasantly shiny surface, there is less satisfaction in these easier ways of getting effect. In woodwork, similarly, one prefers wood inlay to a stopping of mastic.

A niellist with a sense of colour would insensibly be drawn to enamel. Champlevé enamel differs from niello only in two respects: that it is not confined to black, and that it is no longer an amalgam of metal but a vitreous paste that is filled in. The designs on page 191 are of a type characteristic of early seventeenth century goldsmith's work, the white parts representing the gold, the black the enamel. The more rudely executed thirteenth century French enamel upon bronze below shows a thicker wall of metal between the colours of the shield and the charge upon it, very obviously left in relief by digging out the cells for the vitreous pastes. In the German work opposite, in which the brassy surface of the metal is characteristically left to form a background to the enamel, they are filled in with colour which is not flat. The cells, it must be understood, are necessary to keep the various colours apart and give the metallic

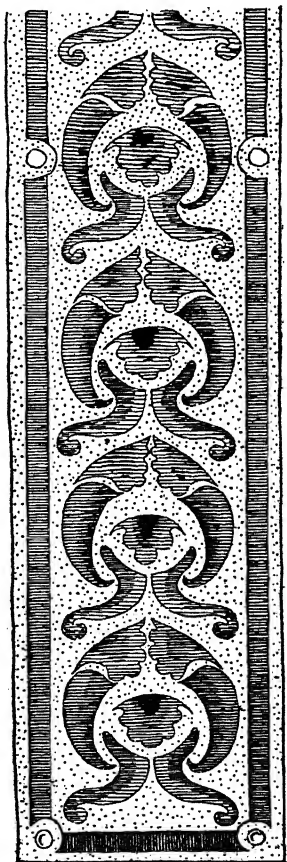


185. CHAMPLEVÉ ENAMEL.

outline to the drawing; but in cases where the colours may with advantage blend one into the other there is no reason why pastes of two or three different colours should not be filled into the same cell—and so the enameller proceeds a stage further, and gradates his colour from blue to green, from green to yellow, and so on.



186. CHAMPLEVÉ AND CLOISONNÉ
ENAMEL.



187. CHAMPLEVÉ
ENAMEL.

Historically speaking, cloisonné enamel anticipates champlevé. It always *looks* to me as if champlevé were the earlier of the two. In any case, if cloisonné had not been invented before, the worker in champlevé would have hit upon it as a way of sparing himself the labour of carefully cutting away the ground so as to leave, for example, such fine lines as those marking the folds of the drapery in illustration 186, which are as obviously cloisons of wire as the outline of the drapery itself is plainly cut out of the solid metal.

The convention of using metal to represent flesh tints distinctly belongs to champlevé. The cloisons, again, introduced into the background of the Lion of S. Mark below are suggested by the necessity of breaking up areas which it would



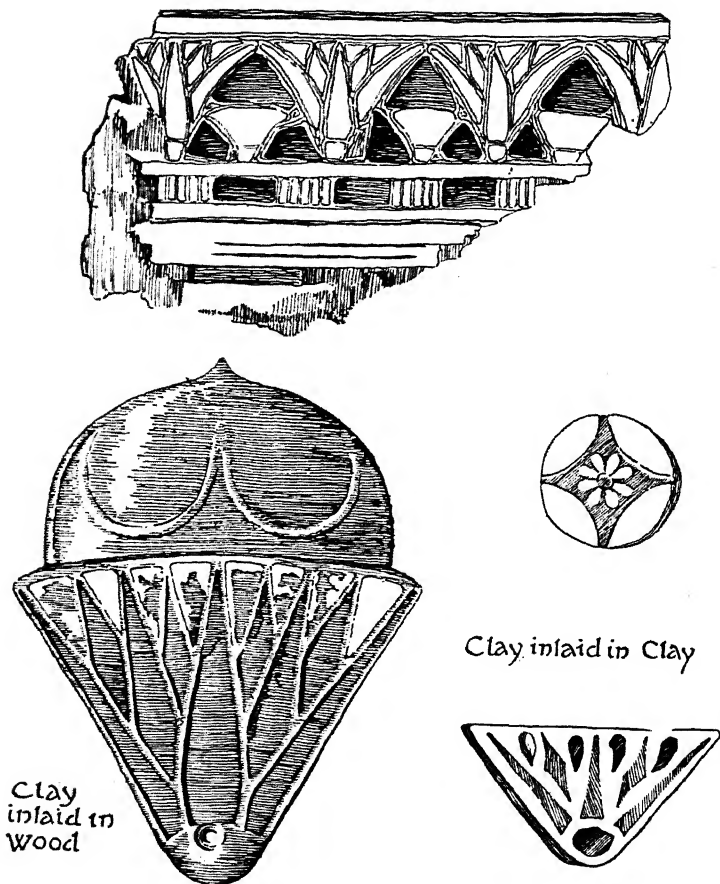
188. CHAMPLEVÉ AND CLOISONNÉ ENAMEL.



189. VITREOUS INLAY IN IVORY—CHAMPLEVÉ.

have been unsafe to fill with masses of unbroken colour. The expediency of infinitely small subdivision was from the first very strongly felt by the Chinese and Japanese enamellers, whose cloisons used always to form a network of bright brassy lines which incidentally give quality to their colour. Of late years the Europeanised Japanese have learnt to fire pictures in enamel in which cloisons barely, if at all, occur—and they are proud of this their less decorative accomplishment.

Champlevé invites broad spaces of plain metal artistically valuable; but these plain spaces prove the incentive to another



190, 191, 192, 193. INLAYS OF VITREOUS PASTE AND CLAY
IN BONE, WOOD AND POTTERY.

practice, the engraving of the metal—whereby the breadth of effect is endangered. In the Lion of S. Mark (188) such engraving is judiciously used only to give the necessary drawing, the mane of the beast and the feathering of its wings. Whether this had better be done in enamel is

partly a question of scale. The features of S. James (186), it will be seen, are traced in lines of enamel colour.

Referring again to the origin of *champlevé*, it was of great antiquity, though not perhaps in the form of *vitreous* inlay of the kind we call enamel. The Egyptians of the time of Nimrod inlaid not only precious stones in ivory (189), and pottery or vitreous paste into bone and wood, but, finally, clay into clay (190 to 193), forestalling thus by long centuries our so-called "encaustic" tilework. The modern tiles here given (194) are a development of the old "encaustic" process. The design is impressed in plastic clay, and clay of different colours is laid into the cells thus given—or, as a matter of fact, piled on and scraped level with the surface of the tile.

The use of enamel was preceded by the inlaying of precious stones—which enamel and coloured glass itself were both at first no doubt meant to simulate. In the Egyptian ivory



194. CHAMPLEVÉ TILES INLAID WITH CLAYS.

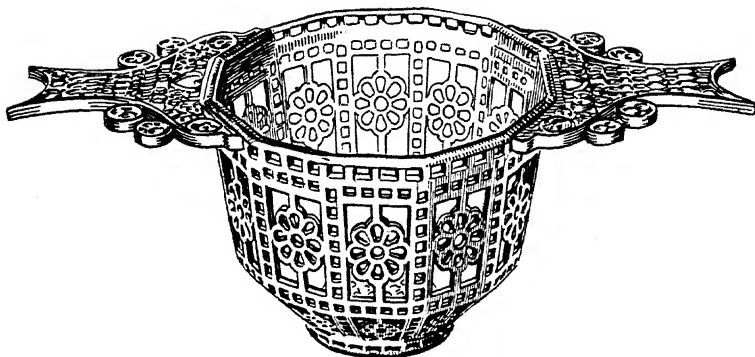
carving (189) the stones were set opaque. In the Byzantine Gothic bowl opposite they were set in fretwork of gold. The cells were not merely dug out but cut through, giving in miniature the effect of a stained glass window, an effect subsequently produced in enamel of the kind called "*plique à jour*"—in which the metal backing of cloisonné enamel is removed so that the light may shine through. It is more than possible that enamel of this kind may have been the origin of stained glass, especially if we allow that the glazier's art was derived from the East, where the windows were of plaster (195) into which little jewels of glass were embedded.

Cloisonné enamel, to return to what is supposed to be the earlier method, was also, no doubt, preceded by, and was meant to represent, stones more or less precious; and when glass was first inlaid in imitation of them it was

merely cemented into the cells constructed for it. The fusion of a glass paste was a stage in advance, which soon developed into an art in itself. The cloisons of the Græco-Bactrian armulet (197) were devised to form cells for inlay, not enamel, and the same thing occurs in Egyptian jewellery (22). It was the common practice in Anglo-Saxon goldsmith's work to encloison slices of garnet (201). In the Merovingian fibula (200) it is coloured glass that is set in cloisons of gold upon a bronze foundation. That inlay such as this was the



195. FRAMED IN PLASTER.



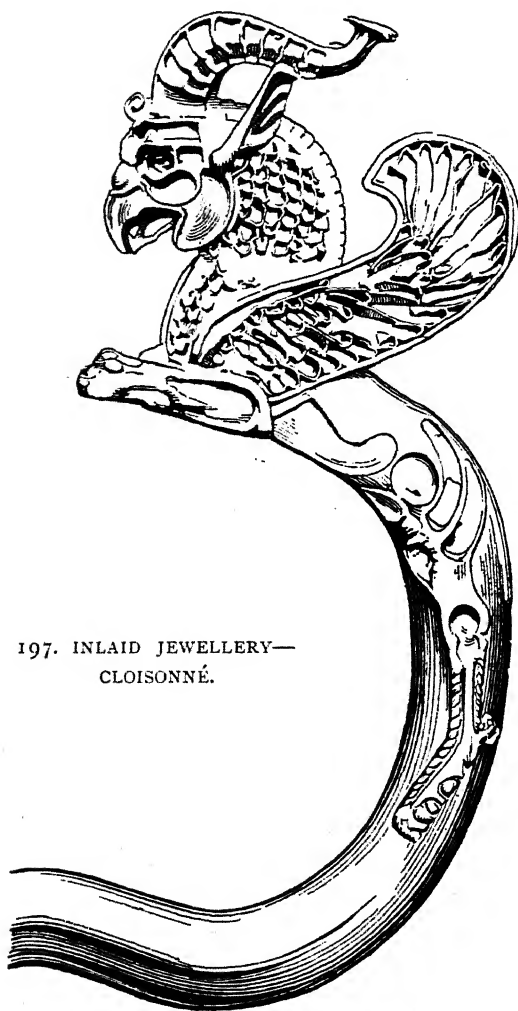
196. FRETTED FRAMEWORK OF TRANSLUCENT JEWELLERY.

forerunner to enamel is so clear as to need no demonstration ; but it is interesting to compare, for example, such work as the Anglo-Saxon cloisonné garnet work on page 192 and the champlevé designs on page 191, in a way so much alike, and yet so distinctively in the one case built up in wire, in the other ploughed out of the solid metal.

Cloisonné enamel is essentially a goldsmith's device. His habitual use of gold wire and solder prepares him for the work. It is even possible for him to fuse enamel with the blowpipe, in the use of which his art compels him to be expert. In looking at a design in filigree such as the Byzantine work on page 202 one almost wonders how the goldsmith came to stop short of enamel ; the cells are ready built for it, the jewels seem to ask for its support.

In the more modern Russian work on page 201 the enamel strikes one as being the natural completion of the design in filigree ; and the use of a twisted wire is one reason at least for leaving the surface of the enamel as it came from the fire. The more common practice in opaque enamel is to grind the face of it level with the edge of the cloisons, so as to get a quite smooth surface.

The Chinese and the early Mediæval enamellers have



197. INLAID JEWELLERY—
CLOISONNÉ.

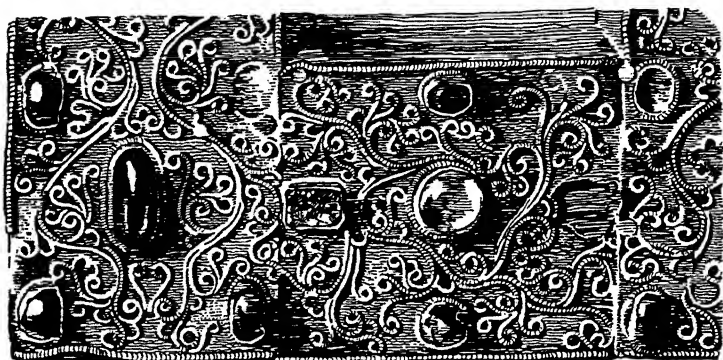
shown what beautiful colour may be got in this way, the network of bright cloisons harmonising it; but there is a quality in the surface of the paste as it floats in melting over the ground of its cell which is also well worth preserving.

The only further step in enamelling which need be described is suggested by the use of translucent enamel, which shows naturally lighter or darker according to its depth. This gives opportunity for a new effect, gradation of tone: the goldsmith

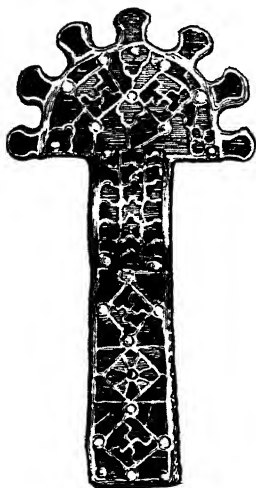
has only to engrave his design in intaglio, and the strength of his colour gives the effect of modelling—if need be. Eventually enamelling becomes, for better or for worse, a



198. FILIGREE CLOISONNÉ ENAMEL.



199. BYZANTINE FILIGREE IN SILVER GILT.

200. GLASS INLAY IN
BRONZE—CLOISONNÉ.

201. GARNET INLAY—CLOISONNÉ.

painter's art. At its most decorative, it was a goldsmith's art, the means which his appliances allowed him of introducing into his work colour over and above what precious stones would give.

XI. ALLIED PROCESSES.

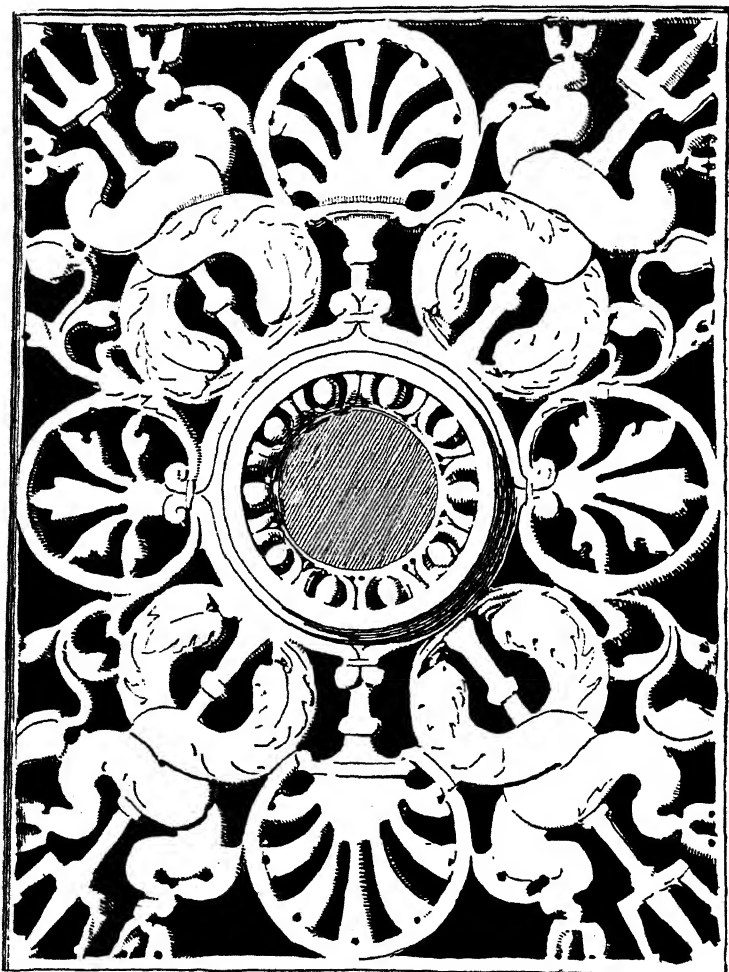
Pierced carving a sort of fretwork—Fretcutting ; its conditions ; its relation to material—The fret-saw—The stencil plate a fret—Ties—Design for stencilling—Japanese stencils—Ties in lace—Ties in stencilling not to be effaced—Stencilling and embroidery the artist's personal means of manufacture ; an exercise in practical design—Fret and inlay—Counter-change—Goldsmith's filigree and blacksmith's spiral ornament—Wire and couched cord—Poincillé "tooling" and nailwork.

SOME processes are more nearly allied than is supposed. A carver has only to sink the ground of his design deep enough, and he pierces the plank, lets daylight through. This carving "*à jour*" as the French call it, introduces quite a new element into design—the necessity, namely, of tying the design together in such a way as to prevent its falling to pieces, and in the second place to make it strong enough for its practical purpose.

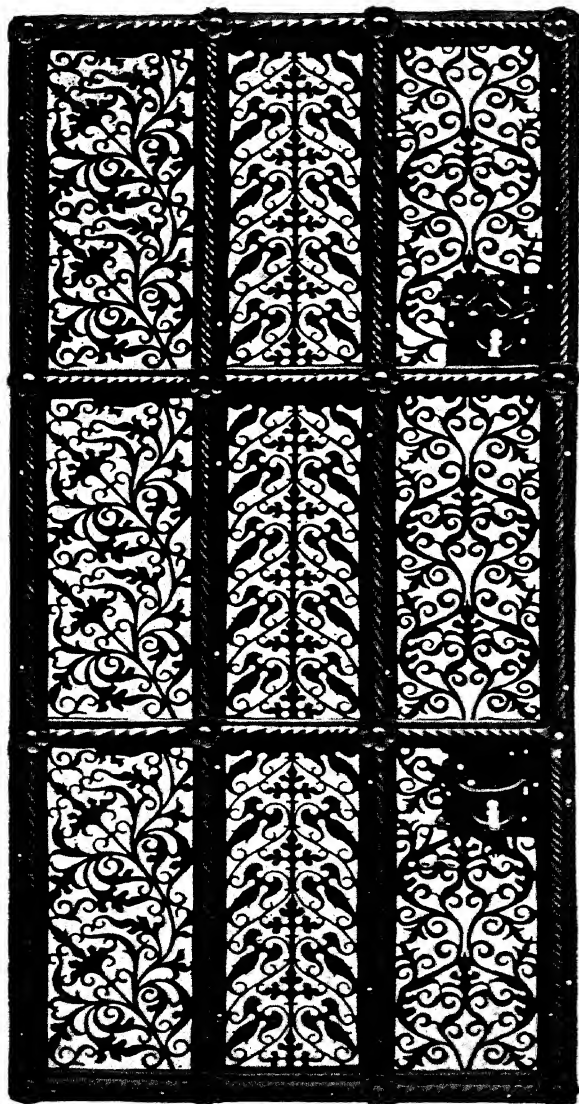
The shape of the background spaces in his design is never quite absent from the consideration of the designer, but in pierced work they need more than ever his attention, silhouetting as they do the ornament, and calling perhaps almost as much attention to themselves as to it. Free-standing ornament such as that of Tullio Lombardo overleaf presents quite a new problem in design.

The fret-saw has not, it must be owned, had a happy effect upon design. The endeavour to avoid the continual removal and refixing of the blade or the reversing of its action has led, naturally enough, to long sweeping lines, which may be regarded as characteristic of this way of

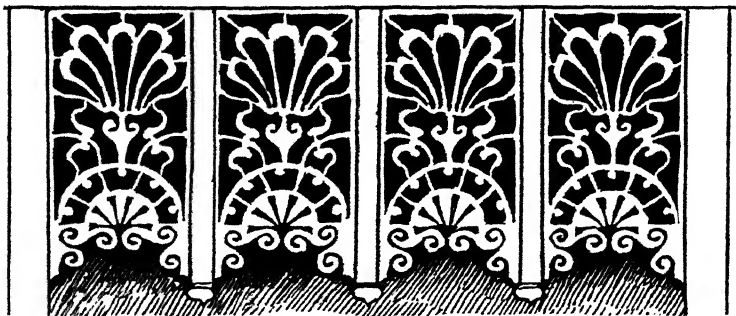
piercing. But the problem how to give free play to the saw without something like flimsiness in the fret has so rarely been solved that the idea of fretwork is associated in men's



202. FRETTED MARBLE.



203. FRETTED IRON.



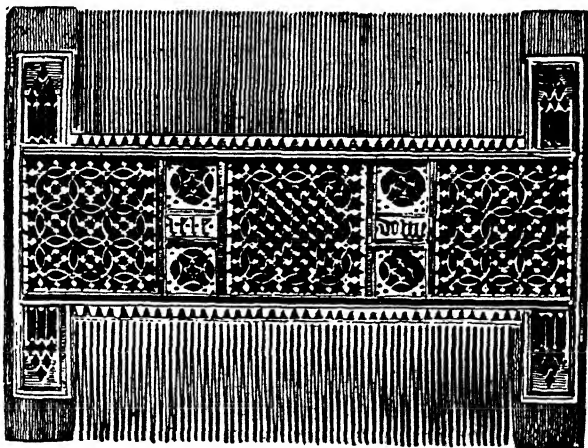
204. FRETTED WOOD.

minds with the trivial decoration of pianos, artistically beneath even "cottage" architecture.

The actual strength of a fret, and the consequent length of unbroken line it is safe to allow, depends in a great measure upon the material. The Flemish Grille, for example, on page 205, which has remained intact for centuries in iron, would not have held together long in wood, which needs, as will be seen above, much more closely tying together, even at the cost of removing and re-inserting the saw.

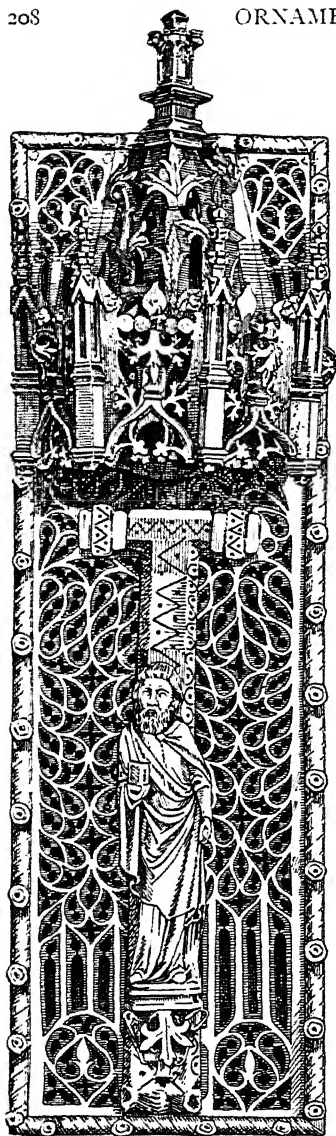
It should be plain from the character of a fret whether it was designed to be cut in wood or iron, and even whether it was to be in hard wood like box (opposite) or in soft pine. A close grain such as that of ivory or box-wood, or tough material such as brass or iron, not only allows but is a temptation to long continuous lines and forms comparatively free and florid, as well as to tenuity of division and general delicacy. In proportion also to the fragility of the material is the danger of leaving parts of the design free of connection. But in no case should projecting points be left—they have an objectionable way of catching hold of any textile thing that may come within their reach; and even if there is no danger of that, or of their being broken off, they have a look of insecurity, which it is

the designer's business to anticipate. The fret-saw is a convenience only so long as we do not allow it to affect design injuriously. Working as the mediæval smith did with the chisel (203), he arrived as naturally at well-knit pattern as we with the fret-saw wander away from it. The use of fret over fret (page 208) was the fifteenth century locksmith's means of arriving at tracery in relief which it would have been most laborious to carve out of one solid sheet of iron.



205. FRETTED BOXWOOD.

Some interesting variations upon ordinary fretwork deserve to be mentioned. The acme of simplicity in fret-sawing is where planks are merely sawn at the edges so as when placed side by side to show pierced pattern-work. This device does away with all necessity for any preliminary drilling for the insertion of the fret-saw, and several planks can, of course, be cut at once. It is quite commonly and very cleverly used to lighten and enliven the balconies of Swiss chalets (page 209). The Arabs employed it, too, and carried it further still in the wooden vallances which formed a feature in their domestic architecture. In a similar way they notched



206. FRET OVER FRET.

planks of wood and crossed them so as to form ingenious trellis patterns (page 210). The intricate wooden lattice work of the Japanese which looks as if it had been fretted out of a single plank but was not, is put together in a somewhat similar way, the notching, however, in that case being in the *thickness* of the laths and only for the purpose of construction. The drawing on page 211 should make this clear.

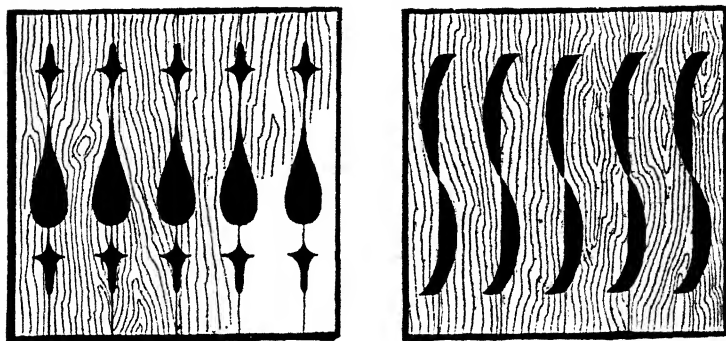
Apart from the consideration of the fret-saw, the principles involved in the planning out of pierced work are those which govern the design of stencilling. For a stencil plate, as a glance at the Japanese examples on page 212 will show is neither more nor less than a fret (of cartridge paper or whatever it may be) through which pigment is rubbed in to form a pattern on the ground beneath the plate protecting the parts where no pattern is to be.

Stencilled ornament is literally a positive of which the negative is a fret. Lay any fret close down on to a sheet of sensitised paper, and the light will do the stencilling and print

a pattern for you. Nor would it be a very great stretch of imagination to regard the dark background seen through a pierced panel as thus printed in shadow.

Whether the print from a fret will make a satisfactory stencil will depend upon how far the print has been taken into account in its design. In the design of a stencil plate the print is the prime consideration; the fret is only a means to the end of printing.

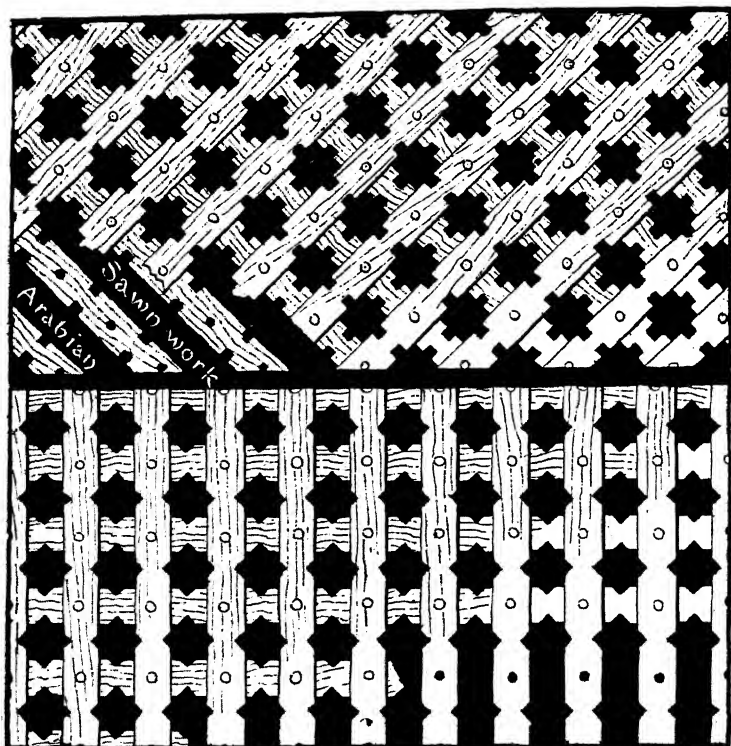
The consistency and strength of the stencil plate impose a very stern condition upon the design of a pattern to be



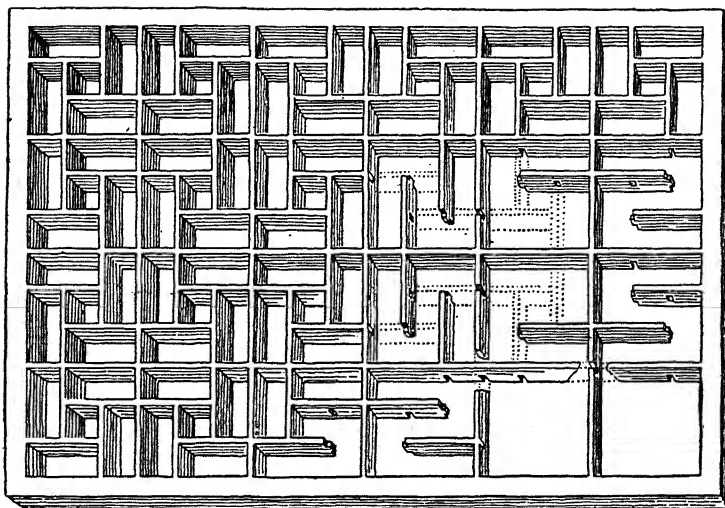
207. PATTERNS SAWN OUT OF PLANKS—SWISS.

stencilled. The smaller the parts of the design, and the wider the space between them, the stronger the plate. In any case the design must be broken up into small parts. The art of the designer is in not making the design look "bitty" in consequence. He has to get his effect by means of a plate which holds together, which is strong enough to endure battering with a stiff brush, and which leaves nothing to be made good by hand after printing. His "ties," that is to say, must in no way hurt the design. They should in fact be an integral part of it. They are the controlling condition, and have a great deal to say as to the style of design to be adopted (214).

In powderings and other disconnected diaper work the difficulty of stencil design is reduced to a minimum. The effect of continuous lines is not so easily to be obtained, since they must actually be broken at short intervals. It may be got, however, by judiciously crossing them with features in such a way that a helpful tie takes its place in the design as the necessary outline to a leaf or whatever it may be. See how the iris flowers cross the leaves in the Japanese stencil on page 213, and how conveniently the leaves stop the horizontal lines which give a sort of tint to the back-



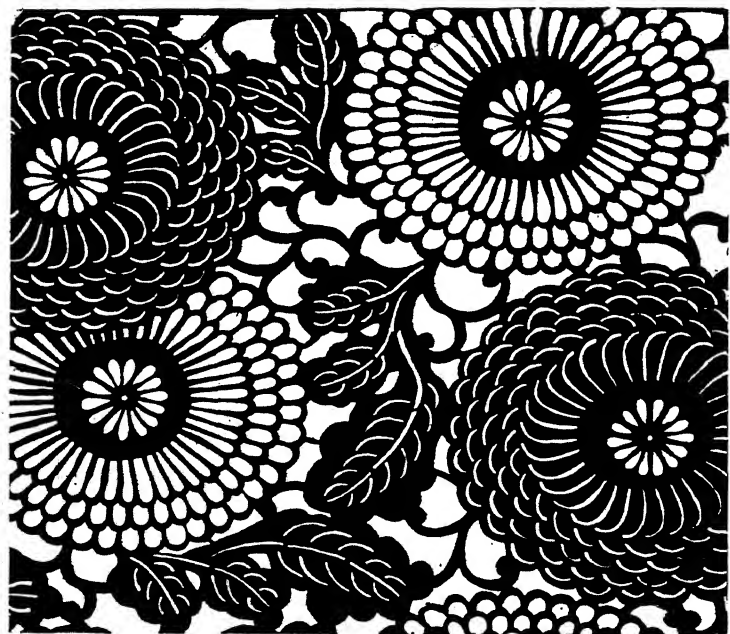
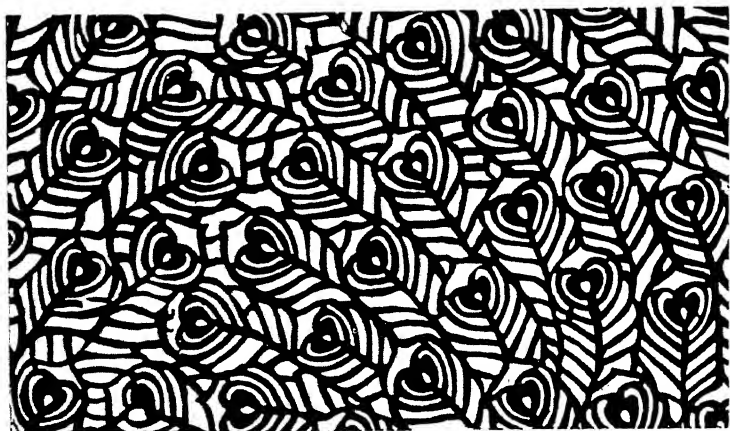
208. NOTCHED PLANKS—ARAB.



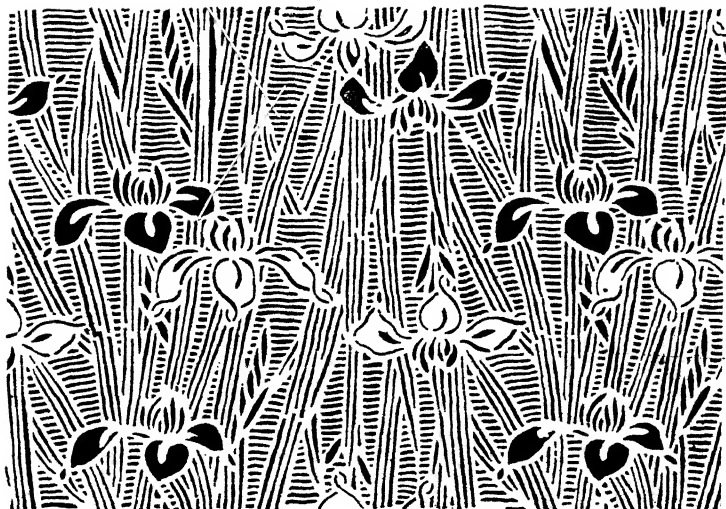
209. FRETLIKE JAPANESE JOINERY.

ground. Crossing stems and interlacing bands of ornament are thus turned to excellent account in stencilling. The very breaks in a line may be turned to use, as in the backgrounds to the fruit blossom on page 213, where in the one case the ties are used to suggest the snowfall, and in the other canes of bamboo. In the cunning design on page 214 a shadowy effect is given to the flying wild ducks by the simple but ingenious device of rendering birds and sky by continuous vertical lines, varying in thickness as they represent the one or the other; and these upright ties are held firmly together by long horizontal cross ties, suggesting streaks of cloud.

Fortunately for the stencil designer, absolute continuity of line is not necessary to the coherence of a design. The mind is quicker to perceive than the eye, and will make good something that is not there—how much will rest partly with the individual. The imaginative artist may perhaps be trusted to leave to the imagination just what it will



210. JAPANESE STENCIL PLATES.

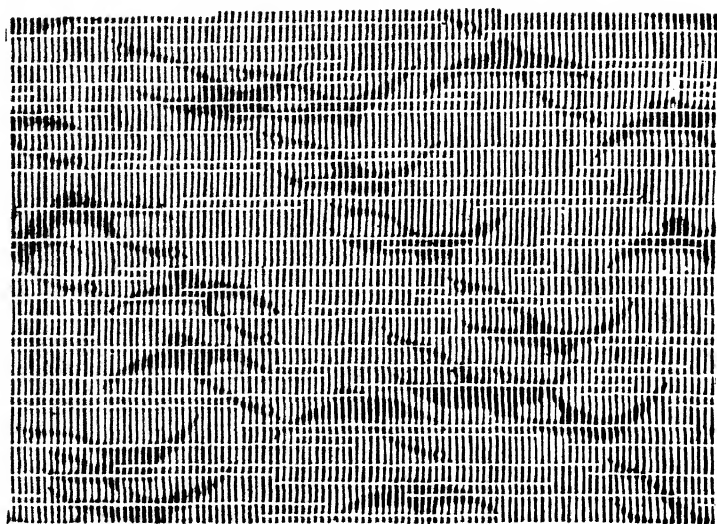


211. JAPANESE STENCILLING.

supply ; but there is always a likelihood that familiarity with danger may breed a certain disregard of it ; an expert stenciller gets into the way of expecting too much of those who come unprepared to take technique for granted.



212. JAPANESE STENCILLING.



213. JAPANESE STENCILLING.

The question is here of stencilling only as a craft in itself. As a mere preliminary process it may be used for what it is worth to the painter. He may paint out all trace of it. It ceases to be, or does not arrive at being, an artistic process. Regarded as such, however, it is the art of designing in ties. The pattern shapes itself in the practised artist's mind as a fret in paper from the very first. The consideration of the ties is a very serious difficulty to the novice ; the expert hardly thinks about them ; they come to him ; he bothers himself no more about them than a painter about the strokes of his brush.

Ties may sometimes be used which are not part of the pattern proper but only make a network on the ground. That happens commonly in certain of the heavier kinds of lace (page 216) in which the ties (or "brides" as they are called) are added for practical purposes to a design otherwise complete in itself. Even there, the design needs to be so

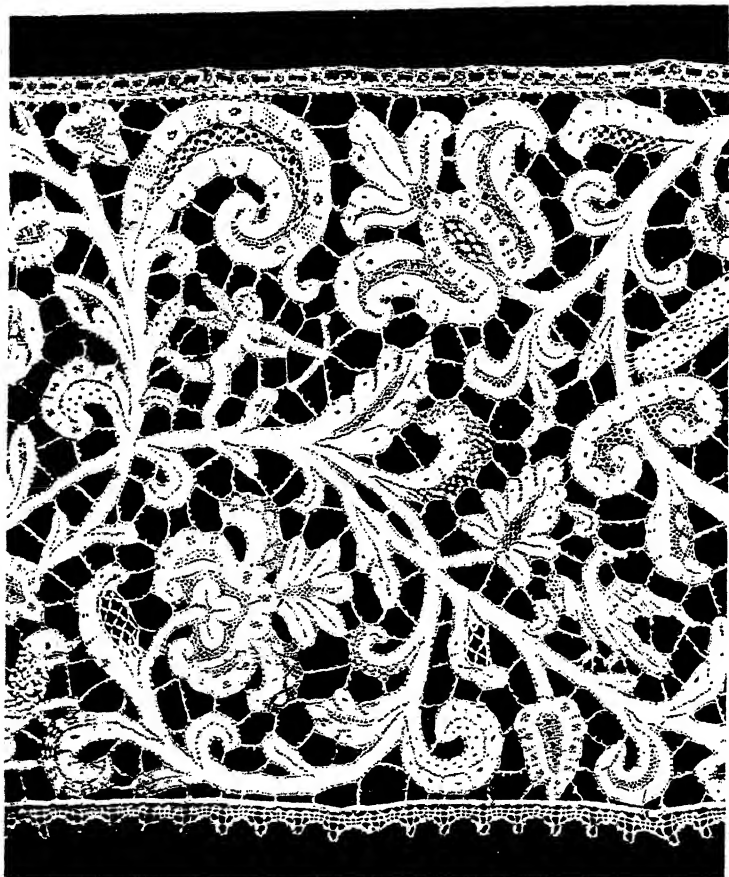
schemed that there are no large open spaces, and that short ties will hold it firmly together. Sometimes the "brides" (in that case sparingly used) are made to bristle with tufts or prickles (page 57) which take away from the rigid look of straight supports. An artful stenciller will introduce ties not really part of the design in such a way that they do not obtrude themselves at all.

The use of *successive* stencil plates, legitimate enough, has this against it, that it is apt to obliterate all evidence of stencilling. It is a practice more useful in manufacture than in art.

The *deliberate* effacing of the ties is not only a gratuitous sacrifice of character but something like a shirking of conditions, a departure at all events from that frank acceptance of them which one expects of a workman—especially if he claims to be an artist. Moreover it is the evasion of a difficulty not confined to stencil design, but (as will be seen



before this chapter is ended) common to design in which there is no possibility of going outside the rules of the game. That is an excuse for making more of the subject than of itself it might deserve. There is another reason also. Stencilling is an art which students have of late years urged to do, not more than it can perhaps (it is possible to do by means of



215. TIES IN NEEDLE-POINT LACE.

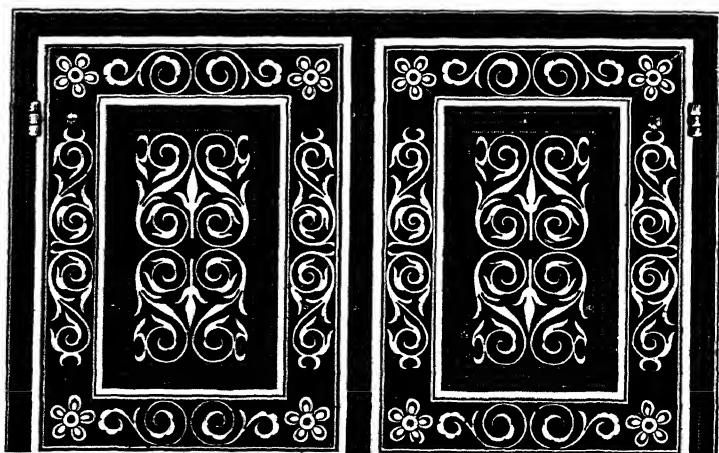


216. STENCIL PATTERN BY GEORGE F. WOOD.



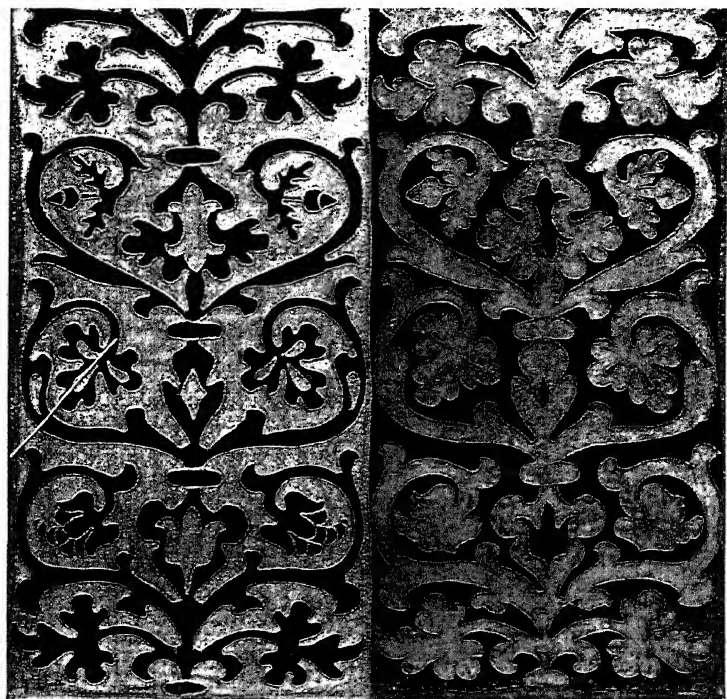
217. COUNTERCHANGED VENEERS OF BRASS AND TORTOISE-SHELL.

it more than is expedient), but more than it should. "Why cut stencils for a design which could in less time have been painted, and better painted, freehand? It is a trespass against fine art!" says one. "Why stencil what could just as well, and more economically, have been printed? It is a



218. IVORY INLAY TOO SUGGESTIVE OF THE FRET-SAW.

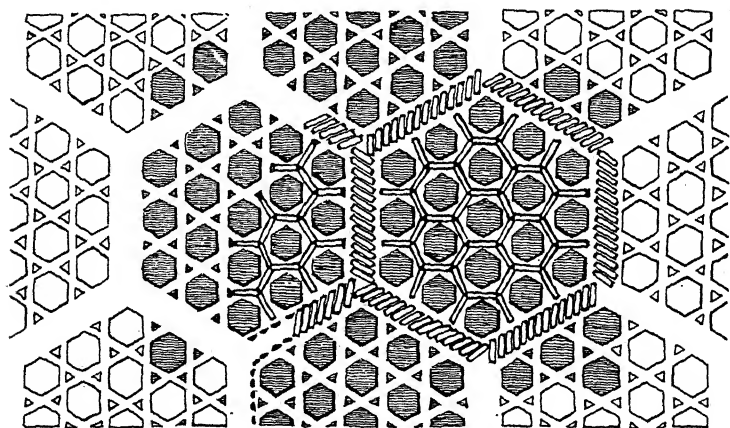
trespass upon manufacture!" says another. And, though we may be disposed to claim a right of way, and ask who it is that says "no thoroughfare," and on what authority, there is reason in the objection, from the objectors' point of view. But theirs is not the one and only standpoint tenable. An



219. COUNTERCHANGING FRETS OF VELVET ON A GROUND OF SILK.

artist may spend more time in cutting stencil plates than it would have taken him to paint the subject right off; he may devote time and trouble to the stencilling of a pattern which might have been as easily, more economically and much more promptly, printed. And in so doing he chooses, not only the best way, but the only way—for him. He has presumably

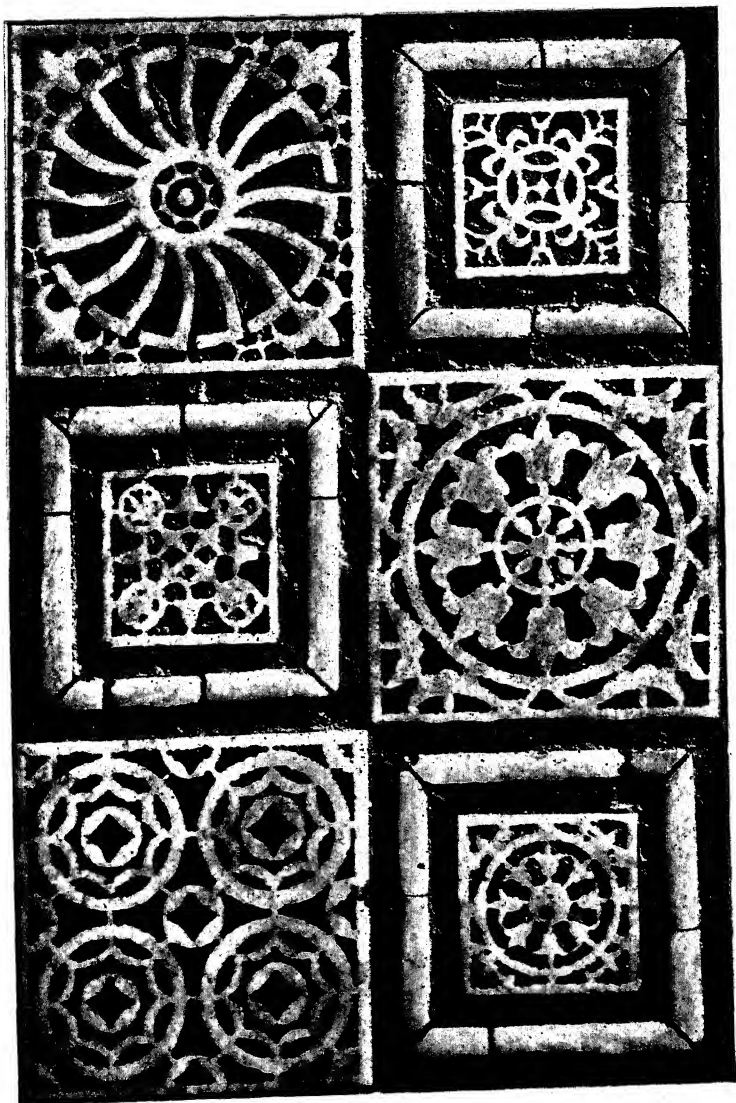
time and energy to spare, and not the mechanical appliances of manufacture. Stencilling is, in fact, the artist's personal means of manufacture. It is his one opportunity of doing his own work or seeing it done under his immediate direction ; it enables him to accept a commission which otherwise he could not have undertaken. He knows perfectly well what he is about, and is thoroughly well advised, then, when he claims to be allowed to stencil no matter what, so long as he does not attempt more than stencil plates will do, or more



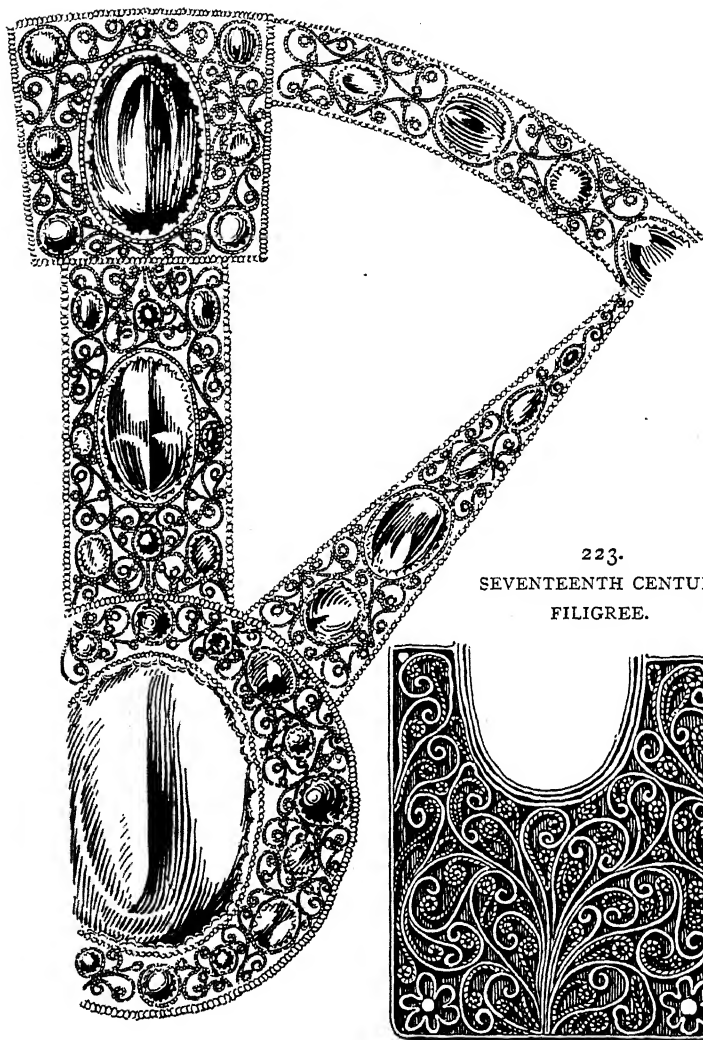
220. FRETTED LEATHER ONLAID ON TO DARKER LEATHER AND SEWN DOWN WITH STRIPS OF PARCHMENT.

than he can do with them. He adopts the available means. Stencilling is the means of reproduction at his hand.

Much in the same way embroidery is in out-of-the-way country districts the peasant's means of textile decoration. She may stitch comparatively mechanical patterns which might perfectly well have been woven. From the city point of view it is not worth doing. But, the cheapest pattern-weaving being beyond her purse, and her labour of no money value, she adopts the only available means of bordering and

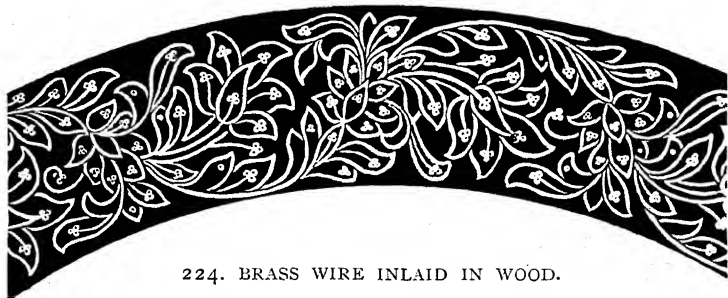


221. INLAID MARBLE.



223.
SEVENTEENTH CENTURY
FILIGREE.

222. TENTH CENTURY FILIGREE.



224. BRASS WIRE INLAID IN WOOD.

trimming the plain linen which is as much as her appliances allow her to weave for the family garments.

With regard to stencilling there is something more to be said, and that more to our point: it enables a student to put his powers of design to the test of practicality. It is a constant source of difficulty to the student that he has not the knowledge, and no means of acquiring the knowledge, of the processes of manufacture for which he would fain design. But here is a process of which he can learn for himself the whole art and mystery by practical experiment. It wants no teaching but that which comes by practice, and as it happens, it is a very fair test of ability to design under conditions; it is a severer test than embroidery (which comes of course more readily to a woman's hand) because it is possible to work almost anything in stitches: there are very strict limits to what is possible in the way of a stencil plate. To have perfected, for example, a pattern so ingeniously adapted to its method of reproduction as that on page 217 is to have explored to some effect the unknown region of practical design which a student cannot too soon enter.

To many forms of inlay a fret is as much the necessary preliminary as it is to stencilling, and in marquetry the fret-saw finds its fit employment. There being no occasion for the fret to hold together of itself, long sweeping lines are possible. The saw invites the use of unbroken scrolls. If

the pattern seems sometimes to float too free in consequence (page 218), that is in part at least the fault of the designer.

It naturally suggests itself to the inlayer working in veneers to cut both ground and pattern at one operation of the saw. (He can in fact cut half a dozen or more.) He has then only to separate his two veneers, to lift out the fretted pattern from the one veneer and lay in its place the corresponding part of the other. Economy suggested a further step, to utilise the two remaining portions of the veneer (otherwise waste) in a similar way. So to scheme a design that the two resulting panels (page 218) are equally or almost equally satisfactory, is a triumph of inventive ingenuity. One of the means employed in *boulle* to that end was to adopt a plan of composition according to which the ornament was partly in brass on tortoise-shell, partly in tortoise-shell on brass.

The idea of counterchanging frets occurred, as a matter of course, to others than marquetry inlayers, to the embroiderer, for example, who had only to fret a design out of velvet (page 219) and to overlay the two resulting strips on to another material, to get striped bed hangings in which the pattern counterchanged. The apparent difference in strength between the two scrolls in the illustration comes of the cord which masks the sewing down confounding itself, in the one case with the ground, and in the other with the pattern. An Oriental, working in close cloth, would actually have inlaid one material into the other.

Another example of an onlaid fret occurs in the case of a Roman shoe in the British Museum (page 220) white leather over green, sewn down with flat strips of gilded parchment which complete the pattern.

The elaborate openwork designs in cut cloth on ladies' capes and so forth are (presumably) cut in the expeditious way that the wholesale tailor cuts out the parts of a garment—namely, with a circular knife which, like a fret-saw, cuts through layer upon layer of cloth at the same time—the worker having simply to guide the solid pile of cloth.

Even in the case of inlay into the solid, in which the fret-saw plays no possible part, the principle of carrying the groundwork through, just as if the inlay were to be stencilled and ties were necessary, is advisedly adopted. The inlaid



225. WIRE INLAY PATTERN—L. F. D.

devices on page 221 would all stencil perfectly—the white marble framing answering to the stencil plate. The reason for this is not far to seek. Comparatively small pieces of inlaid marble are convenient to shape, and are in less danger of being broken than larger ones would be; the framework of

white marble is stronger tied together in that way—and has a satisfying look of strength which is also to the good ; and the network of white lines not only gives consistency to the design, but softens the contrast of light and dark, screening the strong colour as it were with a delicate veil of lace. Just so the net of grey cement lines softens the geometric lines of *Opus Alexandrinum*, and the bright brass lines of Chinese *cloisonné* enamel put crude colour almost out of the question. I do not know that the effect of *champlevé* enamel has ever yet been produced by soldering a fretted sheet of metal on to a plain sheet, and so providing the necessary cells for the vitreous paste ; but the bowl of the Byzantine cup on page 199 is neither more nor less than a fret designed to hold precious stones (compare page 198).

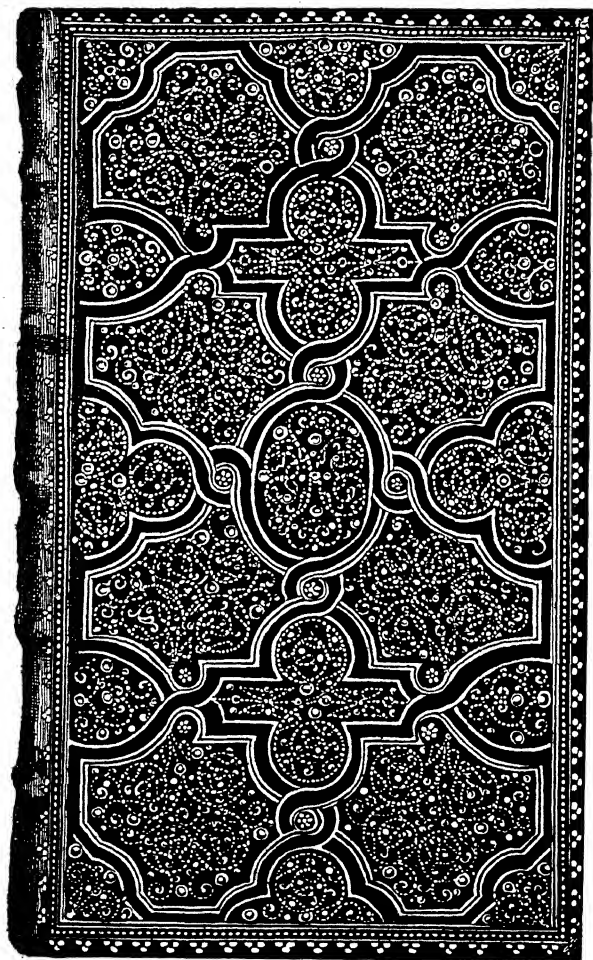
Some few other allied, if not related, processes may here be mentioned. It is impossible not to remark the similarity in the design of filigree and of wrought-iron work. What it was natural for the blacksmith to do with bands of iron it was natural for the goldsmith to do with gold and silver wire. And, as a matter of history, he bent it, in the seventeenth century as in the tenth, into spirals which are in miniature what the scrolls of a chapel screen are in large. Indeed, the Genoese and Maltese artificers of to-day do the same thing still, only carrying it to a further point of minute elaboration. Ornament such as that on page 222 beginning and ending with spiral lines, closely compact at their incurling extremities to give mass (the contrast by the way between plain and twisted wire is effective), is typical of filigree work. Perhaps the goldsmith confined himself too closely to the convenient spiral. The wirework from the North-West Provinces of India on page 223, brass inlaid in pale brown wood, though not a favourable specimen of such work, is a pleasing departure from the too, too curly scroll. A simpler diaper in wire inlay is shown on page 225.

What is convenient to the wireworker is hardly less so to

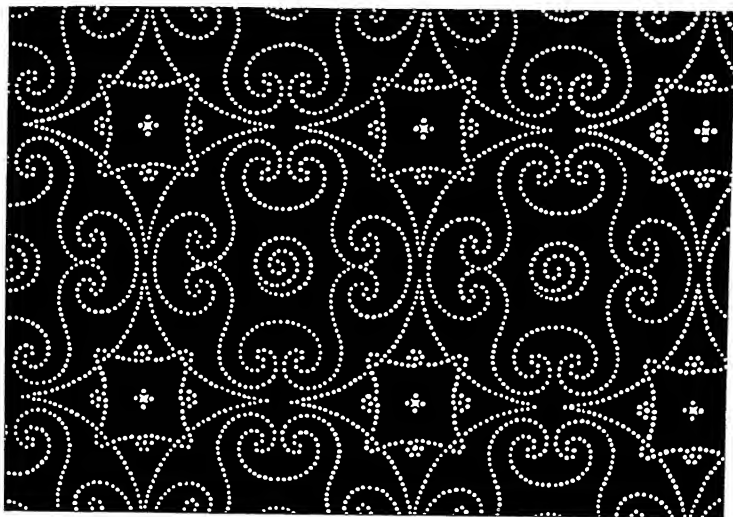


226. FILIGREE OF COUCHED GOLD THREAD.

the worker in gold or silver thread, or cord of any kind ; and good use is made in embroidery of the spiral line conspicuous in filigree. The short lengths of wire, however, so easily soldered together in gold or silver, encourage a scheme of



227. FILIGREE WORK IN BOOKBINDER'S TOOLING.

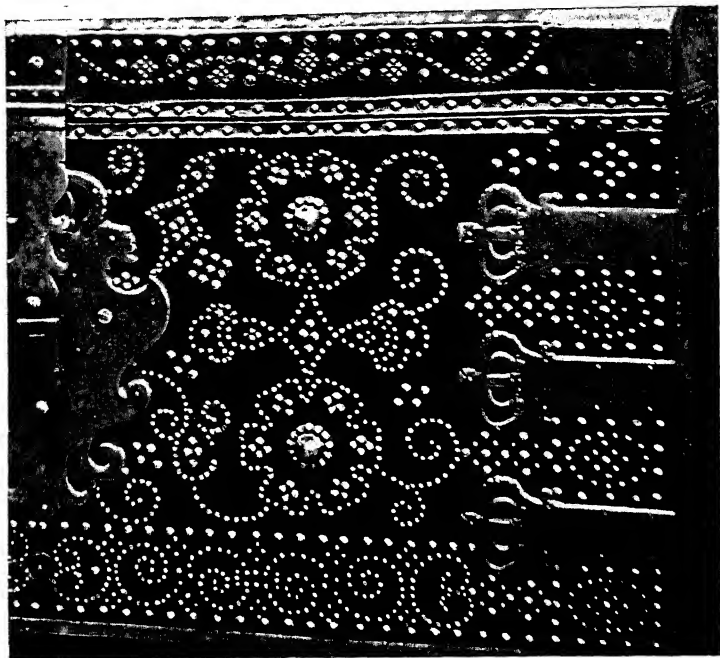


228. ENLARGED DETAIL OF DOTTED PATTERN.

pattern not so appropriate to "couching," where a continuous line is more to the purpose, as shown in the simple but dignified book-cover of Henry VIII. on page 227. If book-covers are to be embroidered that is a model of how to do it. And there is considerable ingenuity in the contriving of the unbroken border.

Apropos of book-covers, the pointillé design (opposite) of Le Gascon, suggestive of filigree, reminds one also of a very different kind of leather-work. The famous binder does not appear to have done what he might with the method. Had he drawn in dots, it would have enabled him to get curves as free as he pleased. He seems to have contented himself with the use of dotted "tools," just filling up with more emphatic dots, to give the close effect of filigree which contrasts so well with the bands of geometric strapwork left plain. The real advantage of the dotted line in tooling seems to me to be that the binder can, as in the detail above (drawn to a larger scale than the binder would usually adopt), draw dot by dot

in gold the curves of his design, without any mechanical repetition whatever. Indeed there need be no repetition at all, since he has only one tool, in the use of which he is quite free. Le Gascon may have been thinking of filigree; but it hardly looks as if he had not had also in his mind the brass nailwork which was once a characteristic decoration on chests

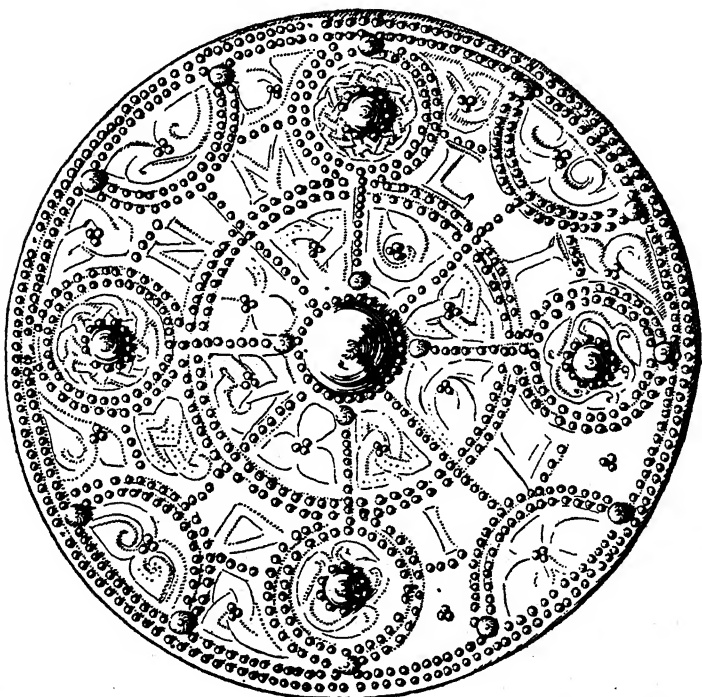


229. DOTTED PATTERN IN NAIL HEADS.

and coffrets of which a fine specimen is given above. It is, otherwise, a curious coincidence that these two different kinds of work, both on leather, should look so much alike.

Large-headed nails are, it will readily be understood, in some degree necessary to tack down the leather on to its wooden frame; and the development of this necessity into

an ornamental feature is all in the direction of practical design. The brass-headed nails at once keep fast the leather and protect it from wear. They also establish a sort of connection between it and the metal clamps and other mounting. The origin of this useful ornamentation is plainly to be



230. ROB ROY'S SHIELD—EMBOSSSED LEATHER WITH METAL RIVETS.

traced to the nails or rivets in the primitive leather "targe," as the Scotch call it, in which they are not only constructively useful but efficacious against sword cuts. The combination of embossed leather and nailwork in Rob Roy's shield (above) makes up a scheme of decoration none the less effective for a certain air of the barbaric about it.

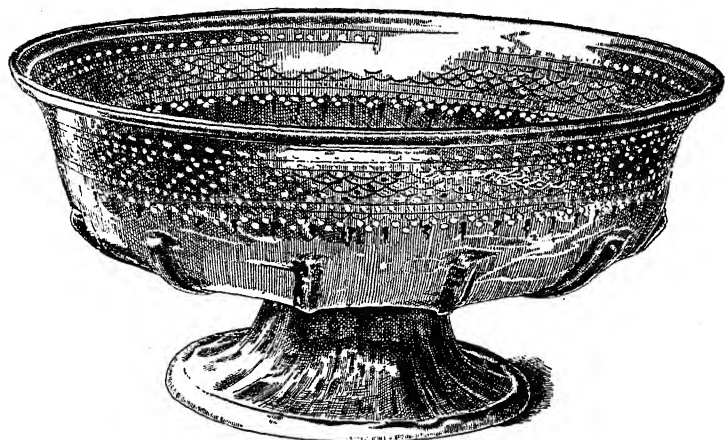
XII. LIKE TO LIKE.

The danger of added ornament—Should be inseparable—Like to like—Incrusted ornament in goldsmith's work—Carved inlay—Glass upon glass, in the form of prunts and threads—Cast and stamped ornament—Expedients permissible in rude work not allowable in work more pretentious—Wedgwood ware—Mechanical aids to manufacture not a modern device—Their use and abuse.

ORNAMENT being, rightly understood, a part of the thing ornamented, there is some risk always in adding it to a thing already fashioned. But the danger is imminent when it comes to incrusting a surface with added ornament. It has a way of appearing to be stuck on, not part of the thing. And it is the appearance of being added which is so objectionable. There are delightful forms of decoration which are always, as it were, put on—embroidery for example. And yet that is no less admirable than tapestry, which is worked into the warp, and goes to make the texture which it decorates. The point seems to be that, though ornament may, and in many cases ought to, show frankly how it was done; though it may, and often ought to, look like what it is, it ought never to look as if it could be removed. Once added, it should seem to be inseparable. That is more likely to be the case if it is applied at a comparatively early stage of the work—relief in clay, for instance, before the vase is fired, in glass whilst yet it has to be submitted to the furnace. In these cases the ornament is in the material of the thing ornamented. There is an obvious and satisfying fitness always in the application of like to like, of metal to metal, glass to glass, clay to clay, silk to silk. It is something to feel that the thing is of

one consistency throughout. And there may be the further practical reason for satisfaction that there is then no danger of unequal wear or unequal shrinkage. In the case of anything which must go through the fire to be fused something like equal contraction and expansion is a necessity.

Goldsmiths have from the earliest days made good use of incrustation in the form of fine wire or of grains and pearls of gold (77-79) soldered on. A thin foil of soft metal may be attached by the aid of heat without solder to a



231. DECORATION IN GLASS UPON GLASS—VENETIAN.

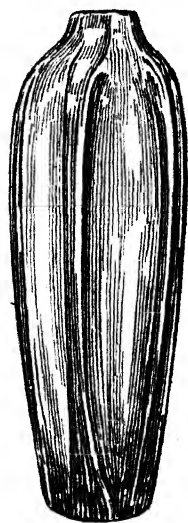
surface roughened to give it tooth. Oriental metalworkers have made admirable use of this expedient, using, for example, silver and copper upon brass or bronze for colour's sake (164, 282). The effect is more that of inlay than of incrustation, and it is open to the reproach of being a makeshift for damascening; but it is undeniably beautiful decoration.

Metal incrustation of a more substantial kind is not always so happy. Undue relief sets one imagining what the vessel or whatever it is would be without the added ornament, and wondering if it is quite secure. There is

the same objection to carved inlay standing up from the ground. The suspicion arises, whether the ornament may not after all be simply glued to the surface. Thorough as the work may be, it has a rather trumpery look.

There are some circumstances under which ornament in fairly high relief may be added; but there must be no mistake about the incorporation of the ornament with the thing ornamented, as, for example, in the case of the up-standing "prunts" applied to glass (see page 150).

Glass upon glass may be taken as a typical instance of incrustated ornament, carried sometimes to excess no doubt,



232.

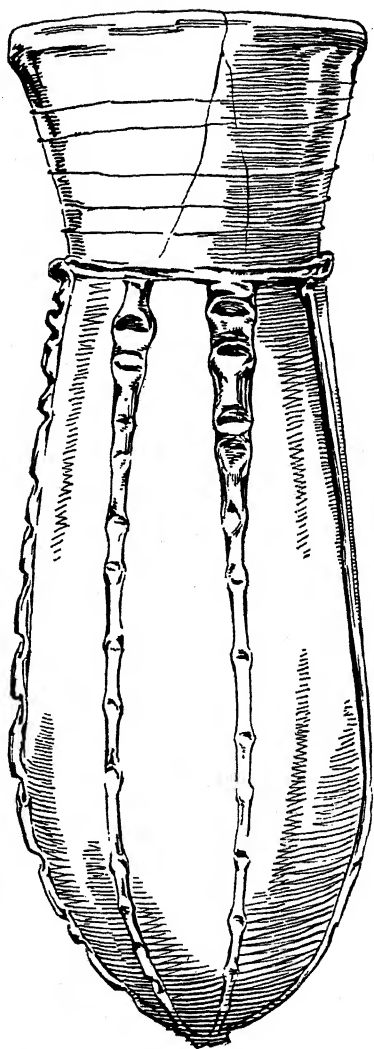
GLASS UPON GLASS,
BY ÉMILE GALLÉ.

but in itself obviously the right thing to do. It is so plain that the enrichment was done when the glass was red-hot. And the forms of the ornament grow so perceptibly out of the nature of the material and the spontaneity and directness with which it needs must be manipulated. Glass in its molten state not only adheres perfectly to red-hot glass, but can be drawn out into threads as thick as a rope or as thin as a whipcord at the will of the glass-blower. The streak of molten glass dropped at one end upon the cup on page 233 has only to be drawn down towards the foot to give ribs which softly accentuate its form. The long buttresses to the vase by M. Gallé on this page, applied in the same way, were further cut upon the wheel (to give them that squarer look) and eventually softened again in the furnace, to ensure the quality of molten rather than cut glass.

The diminishing streaks of glass applied to the Saxon drinking cup opposite are enlivened by simple indentation

with a blunt instrument; and in the Spanish glass overleaf thin threads of greenish colour have been carried round and round the neck, and at its base a sort of calyx of green leaves has been applied. In the ring round the neck of the Venetian vase on page 31 the thread is gouffred as it is laid on.

The pattern on the little Phœnician bottle on page 237 is typical, and one may read in it the way it was done—how the glass-blower first wound round his little bottle threads of different coloured glass, heated it again, and then with a pointed instrument or hook dragged them up and down into zigzags, somewhat in the way that the book-binder combs into pattern the film of colour with which he marbles the edges of his volume. To bring the bottle to an even surface he had only to heat it once more, and roll it on the slab on which from the beginning he works his vessel into more or less cylindrical shape. In fact these vandyked patterns are but a carrying further of the



233. GLASS UPON GLASS—
SAXON.

notion of winding threads of molten glass which seems to have occurred naturally to glass-blowers all the world over. In the little flask on page 238, Greek work, the glass-blower has trailed about his coloured threads in the form of a loose scroll, pressing them down here and there somewhat in the manner explained above in reference to the Anglo-Saxon cup.

The astonishing dexterity of all this rapid sketching, as it were, in red-hot glass adds something to the charm of its



234. GLASS THREADS UPON GLASS—SPANISH.

spontaneity and freedom. Manipulation of the onlaid glass is sometimes carried further. A prunt of glass may be, and in Roman work often was, impressed with a metal seal just as though it were wax.

The sixteenth-century Venetians would sometimes stamp the prunt into the form of a little flower, and then plant a little drop or bead of coloured glass, like a jewel, in its centre.

Devices of this kind are permissible in proportion to the unpretending character of the work. One has nothing to say against the application of cast enrichment to rude stoneware for domestic use, against the beating of hot iron into moulds or swages after the manner of the mediæval smith, or against the stamping in of simple patterns upon leather with dies or punches. The ruder the work the more obviously proper to it is the use of these somewhat mechanical shifts. If the

end of simple and satisfactory enrichment can be got in this way, there is no occasion to spend unnecessary labour in doing without such help. There is a great deal of rough and ready work upon which it is expedient to spend no more time than is necessary—and it may yet be artistically all that is needed. When it comes to work of more artistic pretensions, however, such as figure medallions, cameo heads and so forth, rather bluntly stamped on glass, one begins to resent the use of mechanical appliances. The Chinese have done charming things in the way of applying glass of various colours to a vessel and then cutting away all but the leaf, flower, fruit, or other form destined to be in that particular colour. Where the design was to be in one



235.
COLOURED THREADS
OF GLASS UPON GLASS
—PHœNICIAN.



236. SCROLLWORK OF GLASS
UPON GLASS—GREEK.

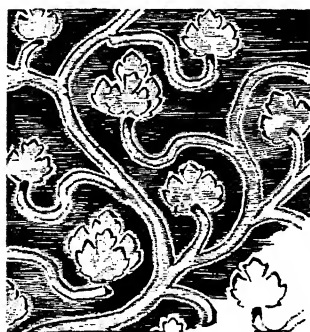
colour only they would, like the Bohemian glass-cutters, blow a vessel say in white coated with red, and cut away either ground or pattern as seemed good to them, softening the effect afterwards in the furnace, apparently. At all events their work has none of the hardness belonging to cut glass. The accepted model of cameo-cutting in glass is the Portland Vase, the very extravagance, as it seems to me, of laborious workmanship. In so far as it is masterly sculpture, why spend it upon so fragile a substance? Regarded as vase decoration it is not decoratively very effective, nor in any way characteristic of glass. A monument of patient labour, yes! but it is only in the copybooks that

mere patience is such a virtue. The power of taking pains, passport though it may be to success in life, is *not* genius—and it is not labour that tells but its intelligent direction.

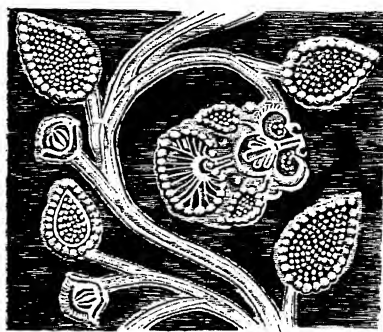
Attention has already been called (pages 148 and 149) to parallel practices of the glassworker with his “prunts” and the potter with his drops of “slip.” And the potter, like the glassworker, can manipulate his onlaid clay, stamp it with a die, and sponge off what oozes out, though, by the way, he was seldom very careful about that. He can also cast the details of his ornament—leaves, berries, or what not, as in the Dutch stoneware opposite—attach them to the moist body of the jug on page 240 with slip, and when all is dry

fix it in the oven. It becomes in fact as much part of the jug as the leaves in the German stoneware below stamped into the body. In both cases the stems are scooped out of the clay with a modelling tool.

The intrinsic beauty of Flaxman's models for ornaments to be applied does not alter the fact that as decoration the famous figure compositions are finnikin in scale and designed without regard to the vase they are to adorn. The repetition of a design by casting is one thing, the sticking on of ready-made figures to a vase is another. The device



237. LEAVES STAMPED
INTO PLASTIC
STONEWARE CLAY.



238. BERRIES, ETC., STAMPED ON
WET CLAY APPLIED TO A STONE-
WARE BODY (SEE 239).

which we relish in unpretending handicraft we may resent in work of high artistic pretensions. Mechanical and perfunctory ways of working are there quite out of place. And the more ambitious the design the less one likes them.

Aids to manufacture are, however, of much more ancient use than is commonly supposed by artists, who, in innocence of the actual methods of the men whose work they profess to admire, rail against practices they imagine to be modern. Jewellers from ancient Greek to mediæval times pressed thin plates of gold into moulds to save themselves

the labour of embossing; bookbinders stamped their leathern covers before ever it occurred to them to tool them in the rather less mechanical manner of the sixteenth-century men. And, in fact, wherever an artist could safely save labour, he never from the beginning had any scruples about so doing. It is not the use of mechanical appliances that is modern but their abuse. The temptation they offer in these



239. STONEWARE MUG (FOR DETAIL SEE 238).

days to the "cheapening" of ornament is so barefaced that it should be easily avoided. Those who yield to it may almost be supposed to have walked into it with their eyes open. An artist with no inclination to scamp his work and no desire to get credit for more than he has done should have no great difficulty in making judicious use even of mechanical appliances.

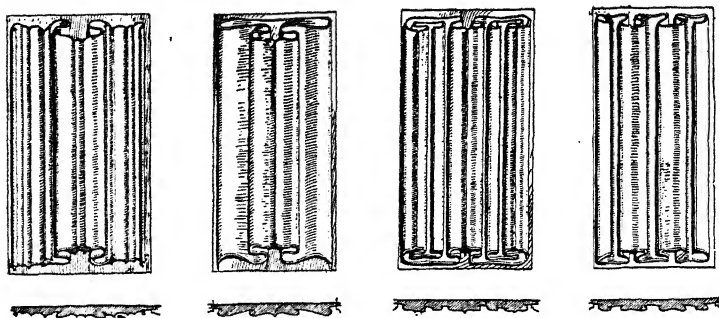
XIII. PARTNERSHIPS.

The limits of a craft—Partnerships between Joiner and Carver ; Turner and Inlayer ; Glazier and Glass Painter ; Glazier and Mosaicist ; Silversmith and Glassblower ; Cabinetmaker and Locksmith ; Bookbinder and Silversmith—Relief and colour—Intaglio and colour—Modelling and mosaic—The concert of the Crafts.

A FAIR inference to be drawn from chapters past is : that a workman does well to keep within the limits of his craft, to aim at precisely what that will allow him to do, and neither to waste his energies in striving after the impossible, nor to stultify himself by doing at great cost of labour something that could better and more easily have been done by some other means. "Let the shoemaker," in short, "stick to his last."

But there is no reason why he should not go into partnership—so long as the partners are well assorted. And there are some undertakings better conducted in partnership than single-handed. Mason and carver, joiner and inlayer, goldsmith and jeweller, have from the first been associated together, and enamelling was at its best when it was bound up with goldsmith's work and not a painter's art simply.

Two or more of the crafts we are now accustomed to keep separate were in old days commonly practised by the same man. The slight carving necessary to the completion of linen-fold panelling (68, 240) came quite within the scope of the joiner—and the gougework enriching so many an old oak chest or settle (82) was without a doubt his doing—the last touch to his handiwork, the expression of his pride and



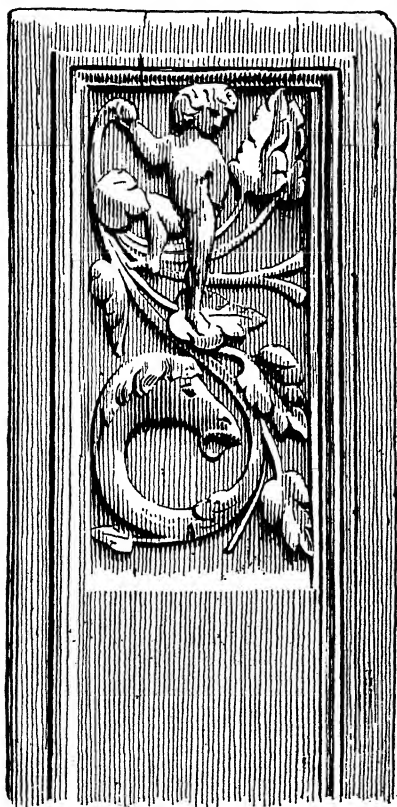
240. JOINER'S "LINENFOLD" PANELLING.

satisfaction in it, a sort of crow now that it was done—and, in a way, a voucher that he had done his best.

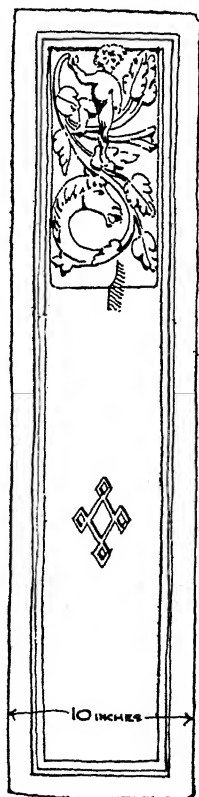
The partnership between joiner and carver (in all probability different men) is better illustrated opposite (242), where the proportions of the one are corrected by the other. The workman of a later period would have framed up his work into smaller panels. The early sixteenth-century joiner confessed the plank in the length of his panel; and the carver, by introducing a little sunk panel within the panel (cutting away only the background of the carving and so not cutting good wood to waste), at once gave interest to the work just on a level with the eye, and, by the horizontal band of carving, which resulted when a series of such panels were put together, corrected the stripey appearance which would have resulted from such long panels. Something of the same kind was done by the joiner and carver together in the period of the Regency. The panel illustrated on page 244 is not a model of ornamental design, but it shows a very ingenious way of partially enriching a panel and yet not planing away the whole of its surface.

It is the practice in most trades for one man to make use of many processes, and to use them often in combination. He frets away the background to his carving and leaves it

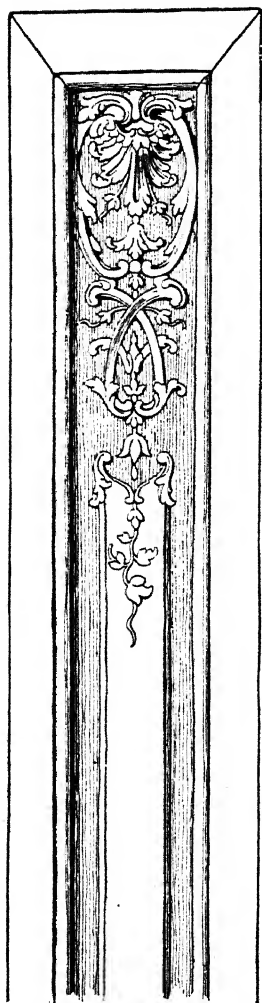
"à jour" (page 245); if it is iron he is working in, he may engrave the surface of his fret, and slightly emboss it (page 246); if it is turning, he may combine it with inlay (page 247), in which last instance he combines what we should now call two trades. Carved inlay, it was said just now (page 234), is seldom happy in its effect. Exception must be made in favour of work such as the fine Japanese screen of which a portion is shown on page 248.



241. DETAIL OF 242.



242. SHOWING
POSITION OF 241.



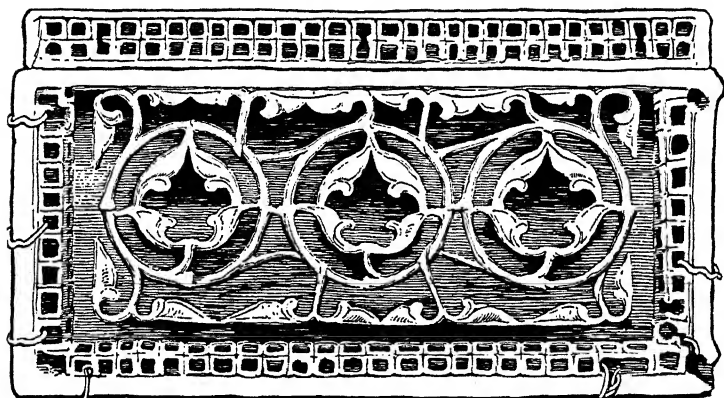
243. PARTIAL ENRICHMENT OF PANEL.

It is not only the design of the eagle, the ingenious way in which the huge bird is built up of relatively small pieces of tusk (the joints of which are lost in the lines of the feathering) and the masterly carving, which reconcile us to the unpromising partnership, but to some extent at least the nature of the ground. The lacquer, not being the actual surface of the wood, somehow gives the impression that the raised work is embedded in it and not stuck on. Or perhaps it is that we accept both ground and raised work as surface covering to an unseen foundation. What is certain is that the effect leaves nothing to be desired.

There are crafts which in their very nature depend upon others—enamelling, as was said, upon goldsmith's and coppersmith's work, and glass painting upon the help of the glazier. The glazier is equally dependent upon the glass painter from the moment he ceases to be content with simple glass mosaic. The parts of the glazier and painter respectively (A and B) in the production of the border (C) are clearly shown in the diagrams on page 249; and even when the glass painter aims at work as pictorial as possible, he is still, with

all our "progress" in enamel painting, dependent upon his partner for the depth and quality of colour which makes

stained glass fit for something more than small domestic window panes. Our pictorial tendencies blind us to the splendid possibilities in the way of purely mosaic glass altogether independent of painting. The truth is that for purposes of the most gorgeous ornament at least the glazier need ask nothing of the painter. And at the Paris Exhibition of 1900 Mr Daumont Tourmel showed some interesting experiments, even in figure design, into which painting did not enter (page 250). He substituted, that is to say, for painting the juxtaposition of tesseræ which he fused in the kiln to



244. FRETTED IVORY CARVING—"À JOUR."

one homogeneous mass with the sheet of colourless glass on to which they were laid. Such partnership as this between glazier and mosaicist might be of great use in the execution of the flesh and other minute features in the case of figure compositions glazed for the rest in plain potmetal glass. Once admit the use of paint upon glass and it is not easy to know where to stop.

Silversmith and glassblower have worked together to some purpose in the production of a small late Roman vase in the British Museum. The cup on page 251 was first

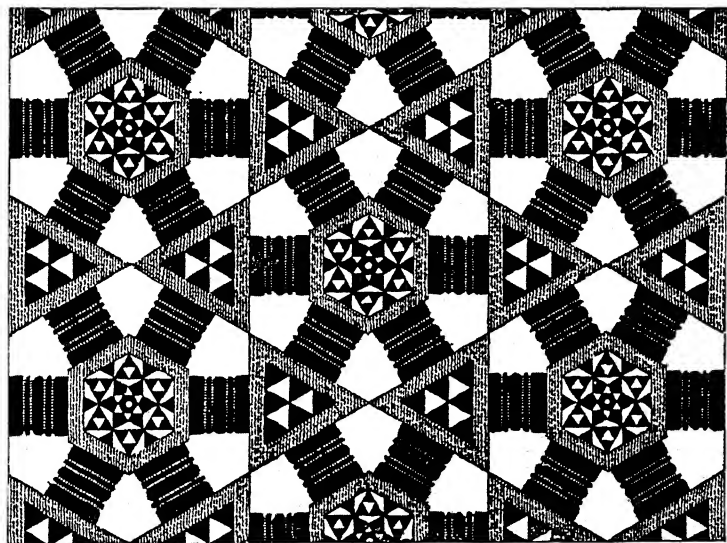
riddled with oval piercings, and into it the glassworker blew his expanding bubble, with the result that the glass, slightly pushed out by the breath of the blower through the openings, stands up upon its surface like sapphires "*en cabochon*." Mr Louis Tiffany has followed up some such hint as this from ancient craftsmanship by blowing glass into a vessel of glass lattice-work, which, being no longer red-hot, offers similar resistance to that of the silver cup, and results in very interesting work due entirely to the glassworker.



245. FRETTED, ENGRAVED, AND SLIGHTLY
EMBOSSSED IRON.

Many a time necessity compels some sort of partnership between one handicraft and another—resulting in design of a compound character—as where in joinery and cabinetmaking provision is made for ironwork in the way of clamps (229), hinges, locks, and so forth (260), in which the mediæval smith found scope for most ingenious and it may be fantastic invention.

Wm. Burges, one of the foremost leaders in the Victorian Gothic Revival, and learned above his contemporaries in mediæval practices, delighted in the association of one craft with another. In the door on page 252 he combines in a way of his own (though he would have called it mediæval) not only wood and iron, but carving and inlay, piercing and enamel; and there is a severity in the result hardly to have been expected. The partnership between bookbinder and



246. INLAID TURNING.

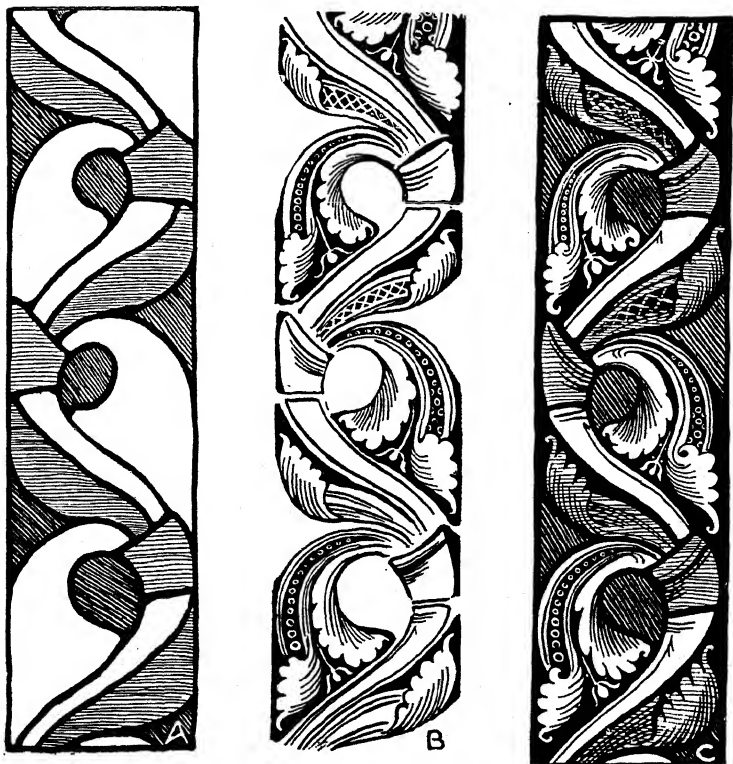
metalworker, primarily also for practical purposes, gives again occasion for interesting schemes of ornament, sometimes, like the opportunity of the smith in the case of door furniture, turned to personal rather than artistic account. The seventeenth-century tooling on page 253 is not of any great account, whilst the corner pieces (engraved and pierced) are in their way admirable—which may be taken as some sort of excuse for the metalworker's thinking only about his part of



247. CARVED IVORY INLAY.

the work ; but nothing will make amends for the painful want of unity in the joint undertaking. We have here the evil effect of craftsmen working not together but in rivalry one with the other. The partnership between colour and relief, so gaily entered into, is one that by no means ends always happily. The coloured reliefs of the Della Robbias, for example, gain sometimes considerably when we see the reproduction of them in monochrome. The monument is less pleasing than the photograph of it. This is of course largely the fault of the harsh colour which was the best they could get in tin enamel. There are plaster reliefs of the same period, coloured in a medium over which the painter had more control, which we would on no account have otherwise. A happy association of

colour with relief occurs in Persian faience, where the modelling is kept purposely dumb, needing in fact a traced outline to give the necessary definition to the pattern. That may be seen in the eight-pointed tile on page 254, though tilemakers adopted the same method in figure-work. The relief is, in fact, no more than a slight convexity in the surface of the ornament—just enough to catch the light and give sparkle to the colour, and yet more to the metallic lustre of the ware. "Slip" (see page 148) gave,



248. COMBINED GLAZIER'S AND PAINTER'S WORK.

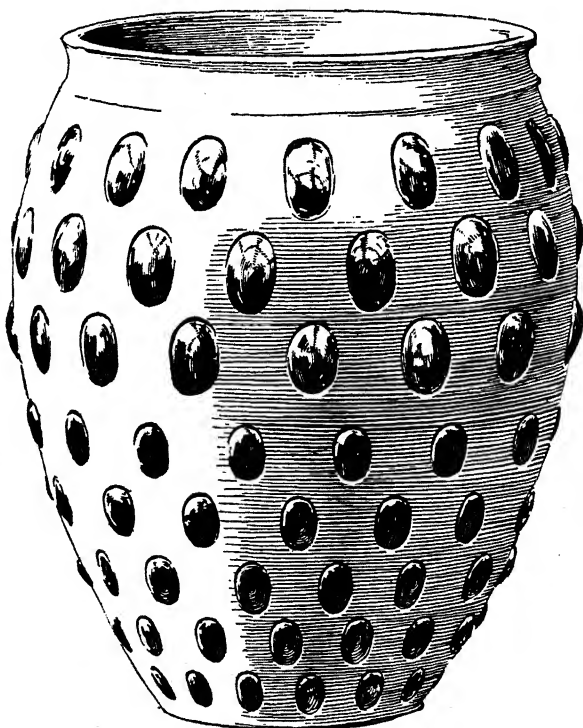


249. STAINED GLASS IN COLOURED TESSERÆ FUSED ON TO A SLAB OF COLOURLESS MATERIAL.

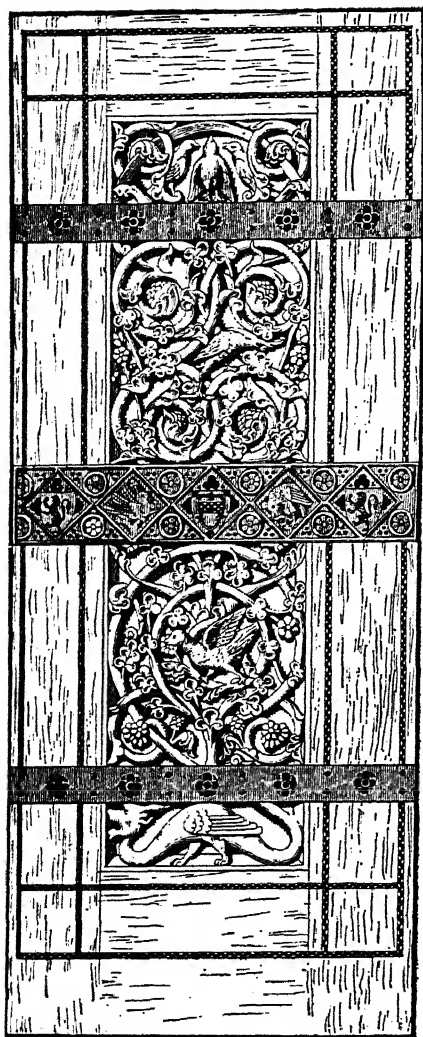
as it happened, just that amount of relief. Here we have the result of one man employing a double process to an end all the while clearly in his view. And it is worth noting that it is in this case the painter who introduces into his work the bare amount of relief necessary to his purpose, and who is relying all the while upon eventual painting for the effect he desires. A modeller would not be so easily content with the relief that is sufficient; he would be less sure of what painting would do for his work. In the same way, it seems that the degree and kind of modelling suitable to tiles or other earthenware to be coated with a coloured glaze (51, 52), is rather what the painter finds necessary than what a modeller would be disposed to do. Referring to coloured relief in another material, it would hardly have occurred to a modeller to make such sparing use of relief as Mr Fred Marriott judiciously employed in the panel shown by him at the Arts and Crafts Exhibition of 1903 (254). It is executed in mother-o'-pearl of various colours (some of it artificially

stained) and gesso, gilt and glazed with transparent colour; but the gesso is only raised just enough to bring the surface into correspondence with the shell inlay (most artfully chosen to give the glint of the armour of S. George and the scales of the dragon) and to impart to the colour a quality not to be got in flat paint. The gesso is in fact that of a painter, intent always upon his colour, and using relief only to enhance the colour effect.

The sculptor's opportunity of like success is in using colour only to assist his relief. But, though there have



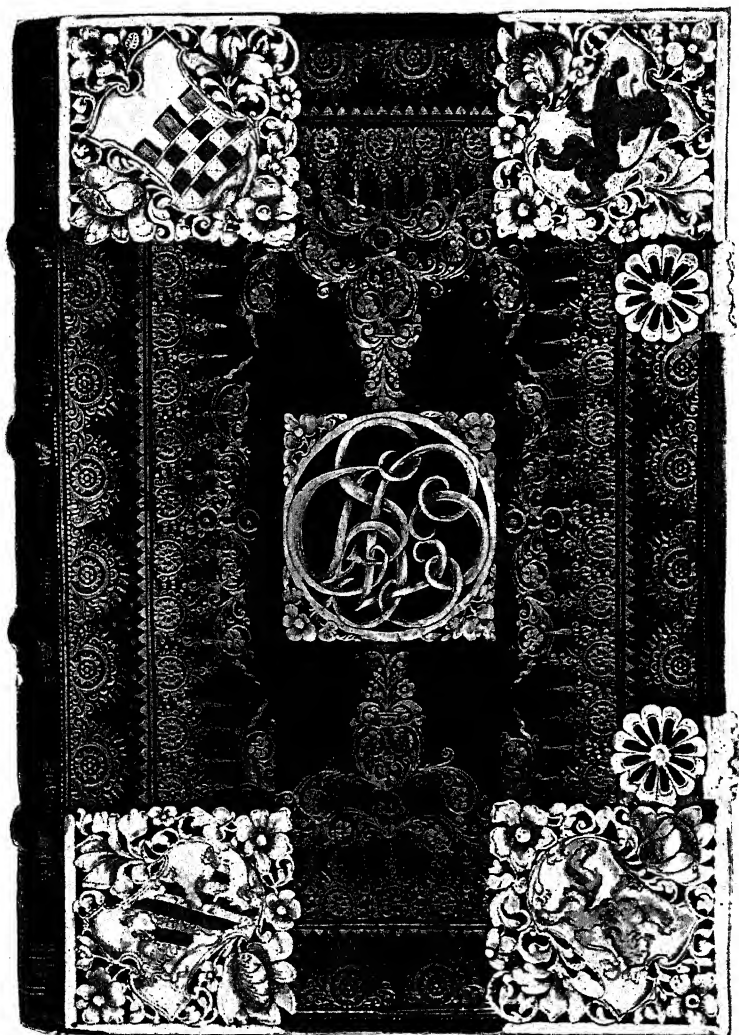
250. COLOURED GLASS BLOWN INTO A PIERCED SILVER CUP.



251. DOOR BY WM. BURGESS.

been chryselephantine statues, and though sculptors of our own day have made ingenious and effective use of coloured materials, painters have on the whole been more successful in making use of relief than sculptors in adding colour to their work.

In the case of combined colour and relief the first question is always which is to be of predominant importance. The one must be subsidiary to the other. The difficulty of subordinating colour to form is simplified by confining it to the background as in the beautiful panel from the Bishop's throne at Ravello (256), where the interstices between the carving are filled in with gilt and coloured glass mosaic; but the colour probably did not stop there; the circular cavities now



252. LEATHER BINDING WITH SILVER MOUNTS.

empty were no doubt inlaid with slabs of lapis or other precious stone.

An interesting and for some purposes very practical method is that shown in the portion of a Chinese screen on page 257. The ornament is there as it were scooped out of lacquered wood before it is painted, and the painting,



253. COLOURED EARTHEN-

WARE IN SOFT RELIEF.

being below the surface, is thus protected from wear or injury. The ancient Egyptians did something of the same kind in their architectural decoration; but their designs, though below the surface of the wall, were slightly modelled in convex relief. In the Chinese screen the sinkings are concave. It is in fact a kind of *champlevé*—only in wood and without enamel (see page 192).



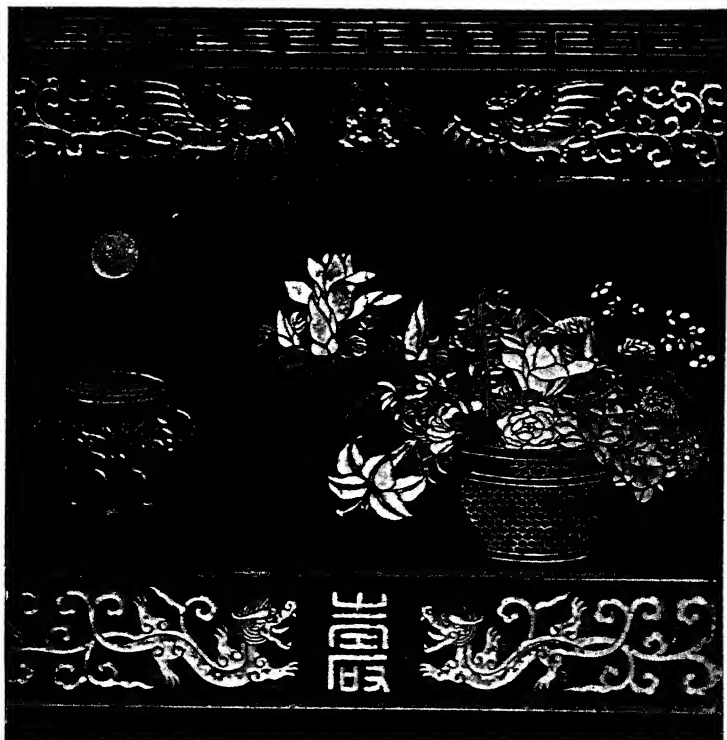
254. PANEL IN MOTHER-O'-PEARL AND GESSO, BY F. MARRIOTT.



255. CARVING IN MARBLE WITH GLASS MOSAIC BACKGROUND.

A remarkable specimen of coloured relief remains to be noticed (page 258). It is one of two small panels of mosaic in the Museum at Naples, discovered at Metaponto, in which the figures in relief are entirely worked over in tesserae.

The mosaic, being of marble, may very possibly have been worked upon with the chisel after it was set; but, whether that was so or not, the mosaicist has succeeded in what might have been thought to be an impossible task. The idea may have been suggested by an accident which happens constantly to the worker in tesserae. In pushing them into the cement, and pushing that down consequently, a neighbouring part of the work already done may be pushed up, and present quite a rounded surface. These particular panels are, if only for their rarity, and for the skill with



256. SUNK ORNAMENT PAINTED.



257. MOSAIC IN RELIEF.

which they are done, exceedingly interesting. They represent, need it be said? rather the kind of thing one is delighted to come upon for once, than what it is advisable to do in mosaic—a characteristic quality of which is that sort of flatness (never absolutely flat but really a slightly undulating or buckling surface) which comes, as one may see at Venice or Palermo, of trying to embed tesserae as evenly as may be in moist cement.

It is difficult in some cases to determine whether compound work is the result of a partnership between different men or only between different methods of work practised by one and the same man. Any doubt, where two have been at work, is proof at least that they have worked in concert. The danger of calling in outside aid is that the ally may turn usurper. In the case of a partnership merely between the handicrafts practised by one man the only danger is lest he should not be master of them all. Even then he may know enough of them for his purpose. The important thing is that he should have a very definite purpose and strictly subordinate to it the crafts he calls to his assistance.

XIV. PRACTICAL DESIGN.

The technique of design—The distribution of ornament—Composition—Masses and lines—System—Symmetry—Recipes—Flat treatment—The function of shading—Variety—Proportion—How far rules are of use—Full and open pattern—Emphasis.

IT has been attempted, so far, to show the relation of ornament to technique. There is also what may be called the technique of design—its application, that is to say, to its position, place, and purpose, quite apart from the material used or the tools and processes employed—the question in short of the distribution of design. The painter's answer to it is "composition." But he has only, as it were, to make a plain statement. The designer of ornament has to undergo the severest cross-examination. He has not merely to distribute his design over a rectangular area of his own choosing, but to accommodate it to a shape and proportions as to which he has no choice. There is no use in pretending to lay down rules for the disposition of design. It is so entirely dependent upon circumstances. Nor is it advisable to map out the lines on which ornament might be distributed over a given surface. Even then much depends upon its purpose, place, and surroundings generally. And, were it possible, it would only be to make the more effective arrangements of line and mass tedious by insisting upon them, and to hinder the exercise of that personal bias which goes so far towards individual design. It is in planning that originality has scope. New forms are only once in a while to be evolved, but infinite variety is possible in arrangement of forms free to us but not our

personal property. A teacher may with advantage demonstrate to his pupils on the blackboard the lines on which a given problem is to be solved ; but anything like the dogmatic laying down of rules would be hurtful, if it were not futile.

The only way of learning composition is to compose. No better exercise could be given to the student than to set him to plan a panel to take its place among existing panels or to form part of a predetermined scheme of decoration. In the criticism of such designs the teacher would naturally point out where they failed, and why, and how they might be made better ; he might in that way impart without pedantry something equivalent to not-to-be-written rules of composition.

A designer goes to work somewhat according to his temperament. One man will attack the problem with a rush ; another will creep up to it. One will begin by planting a shape (or shapes) upon his panel, supporting it by subsidiary shapes, and finally connecting them by the lines necessary to his composition ; another will prepare the way for his design by a more or less geometric groundwork, on which he will build up the lines of his pattern, eventually giving point and focus to it by the introduction of masses judiciously breaking the monotony of line. And either of them is equally right. It depends upon what he wants and what he can do. If, for example, a man can trust himself to start with irregular forms arbitrarily disposed, accidental patches as it were upon his panel—why not ? though another might find it impossible to connect them by any system of lines whatever. The safer plan for *him*, at all events, is to start with some orderly system determining the distribution of any prominent features in the design. It may suggest also the size and shape of them ; but it does not follow that because a designer starts on systematic lines that he may not in the end depart from them widely—so widely that only those who look for the scaffolding would ever suspect it to have been employed. Symmetry is an element of design worthy of all respect ; but it has been

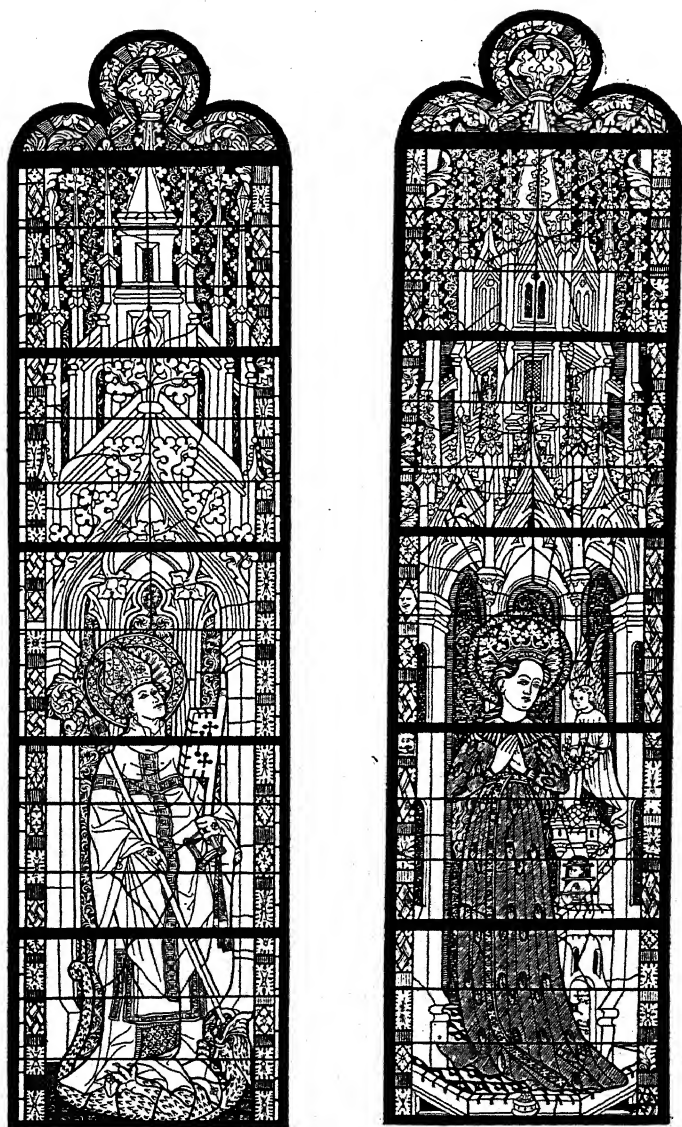
made a fetish. It is the obvious way of arriving at balance. It is the scientific formula that may help us through a difficulty out of which impulse has failed to show the way—no more than that. It is a convenient working rule, invaluable in subsidiary forms of pattern design, but by no means a law, and a very poor substitute for that just sense of balance which it is the designer's part to cultivate. A designer depends upon his wits.

There are other "recipes" for design which have been raised to the dignity of rules, nay, more, to be articles of a faith rather ridiculously credulous—and perniciously, if they effectively fence off the adventurous from fields of design which would give wider scope for personal faculty. Happily the adventurous spirit is not so easily debarred from the path before it.

One of the bogies of the doctrinaire is flat treatment—a quality sometimes regarded as essential to decoration. Only in a very limited sense is that so. Any effect of relief disturbing a surface which use or sentiment warrants us in expecting to be flat is, to say the least, ill judged. Beyond that an artist of taste must be trusted to know what degree of relief is admissible—say in wall painting or stained glass. The projection of the canopies in the Decorated windows opposite is unsatisfactory; but there are windows of later date far more pictorial with which there is less fault to be found.

William Morris explained very well the function of shading in ornament not actually in relief: which is, not to give roundness, but to explain form. So much shading as may be necessary to do that is not to be denied to the designer of ornament. When he attempts to give roundness and relief to it he is sure to offend some whose judgment carries with it the weight of something like authority.

Variety is an element hardly to be dispensed with in ornament, though there are occasions when the insistence of



258. FIFTEENTH CENTURY STAINED GLASS WINDOWS.

monotonous repetition is more to the purpose; but where variety should be introduced, in what form, and in what proportion, there is no possible saying.

Proportion itself is a subject on which there is little more to be said than that almost everything depends upon it. Still it is less a matter of calculation than of feeling, too subtle to be put into words—even in a given case. As to rules of proportion they are (like other rules) wisdom after the event. We deduce from perfect work what we call rules of proportion. It may be doubted whether perfect work ever resulted from conscious obedience to such rules. Or if it did (and Wren may be called to witness that it did) it was not so much a work of art as of science.

Nevertheless, though the artist whose proportions please does not work them out mathematically—a knowledge of the ratios which have worked out satisfactorily is of undoubted use in enabling a man to rectify at once what is amiss in his own work. Canons may be defied by genius; but if when we fail our failure explains itself to us as the consequence of having violated an established rule, we are on the way, realising that, to amend our misdoing. What Ruskin said about perspective is true up to a certain point. You cannot by rules of perspective draw the elaborate tracery of a flamboyant window or the cuspings of a Gothic arch, and must in the difficult drawing of such features depend upon draughtsmanship. But his inference that it is consequently not worth while to master a science which suffices only to solve the simpler problems, is not altogether just. A knowledge of perspective helps at every turn to keep the draughtsman right in his free drawing. Just in the same way rules of proportion come continually to the help of the designer, though he may set out with no canon of foregone proportion. All rules bore an artist; but for the student, at least, they are helpful, and needful until the time comes for breaking away from rule: he will want no telling when that day arrives.

It is something to know the proportions which are at all events safe, still more to be aware of those least conducive to satisfactory results—the panel for example which is too nearly square, or disproportionately long. A teacher will, of course, give his pupils object lessons on such points; but in the end an artist will depend upon himself. He may like a shorter or a narrower panel than the approved proportions give. He will work out the problem for himself; and in the end he will depend less upon measurement than upon his eye.

Given the proportions, then, of a panel or other space to be enriched, the problem is how to distribute his design over it; how proportion the ornament, rich or rare, to its ground? All that can be told him for his guidance is, that the most dangerous course is midway between the two: a half and half effect is never satisfactory. The actual proportion of ground to ornament is not easily to be measured. It has been said that on a well-balanced mediæval shield of arms the charge is equal to its field—the area of the rampant lion, for example, precisely that of the ground not covered by the effigy. If that is in reality so, it does not give one that impression; the charge seems to occupy the ground, not to go shares with it; there is no appearance of half and half. It may be doubted whether any composition would be likely to satisfy the eye in which ground and ornament *appeared* to be more evenly proportioned than as three to five.

Satisfactory ornament generally appears either to cover the ground or leave it rather open. The distribution of the design needs in each case to be thought out; but there is less chance of disguising any want of balance in the parts when the lines of the design confess themselves openly against a plain background. It is for this reason, perhaps, that we all begin by crowding our design as full as possible, and only arrive with experience at the difficult art of making a little ornament occupy the space.

Fulness of pattern does not, however, relieve the designer

from the necessity of distribution even enough but not too even—of balance, that is to say, and of emphasis.

To the designer, more surely than to other artists, art is emphasis. And emphasis is not an after process in design. It begins with its very inception. Where to emphasise, the designer should need no telling. If he does not know the central point or points of his scheme, no one can tell him.

How to emphasise is partly a matter of choice. Emphasis does not mean shouting—though there may be occasion for that. It does not necessarily mean cumulative detail. It may be quite as well secured by reticence as by reiteration. Isolation will give point to a feature, as surely as the pause before or after the word gives it significance. Weight of mass, intensity of colour, strength of line, sharpness of contour, are obvious, but not the only, ways of laying stress upon a point in design. A slight difference in treatment will give accent to it. An angular form will naturally assert itself in the midst of flowing lines. An outline, where the forms generally are not outlined, will have the same effect. The general tendency of the whole design may be towards the significant feature—everything in it may as it were point that way.

Proportion and variety are arrived at by first blocking out the detail in well-defined masses, afterwards perhaps to be so broken up that they are hardly distinguishable. But it is not in the least necessary so to break them up. Some of the most satisfactory masses of ornament are those which have evidently been designed within a definite shape such as the floral ornament which falls within the lines of what is called the Indian shawl pattern. These formal shapes enclosed by no definite line, but given by the grouping of the detail, are a feature in Indian and Persian ornament, to which we have hardly paid attention enough.

XV. OBEDIENT ORNAMENT.

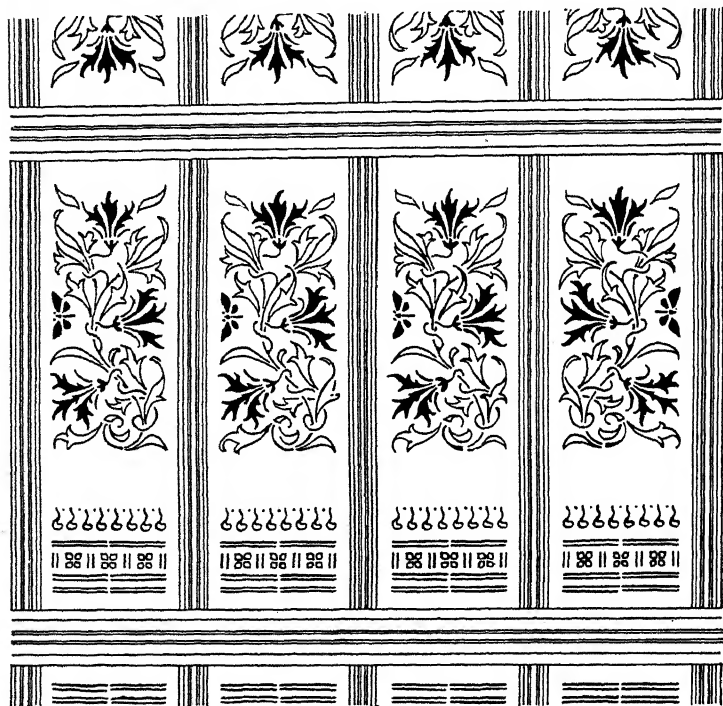
Loyalty to conditions—The natural subservience of ornament to the constructional idea—The point at which it ceases to be natural—Success the only justification of revolt—Undue insistence upon structural subdivisions—Examples, window mullions, wings of a door—Symmetry by implication—Nothing casual in design—Design conforms to the space to be filled—The lines on which a circular design is planned—The lines on which a cylinder or vase is decorated—Contradictory forms—Distortion.

DECORATIVE art in general and ornamental art in particular are pledged, so to speak, to obedience. An artist is free to choose his trade, but not to rebel against conditions to which, by implication, he agreed in choosing it. And if he has in him the stuff of a practical designer he will be loyal to his engagement.

In art, however, no man is called upon to accept a ruling contrary to the clear interests of design and workmanship. It is an axiom of design that decoration should follow and enforce the lines of the thing decorated, from first to last faithfully subserving the constructional idea. It is in the nature of *accompagnement* always. In theory we all endorse that view. In practice the case is not so clear. It is not always easy to decide between the maker of a thing requiring decoration and the man who takes it up where the other left it. The one may ask more than due subservience, the other may claim unwarranted freedom. It is not, to take the case of an art embracing so many arts, a question between architecture and painting, but between an architect and a painter, either one of whom may be the master mind.

Would any one capable of appreciating the scheme of

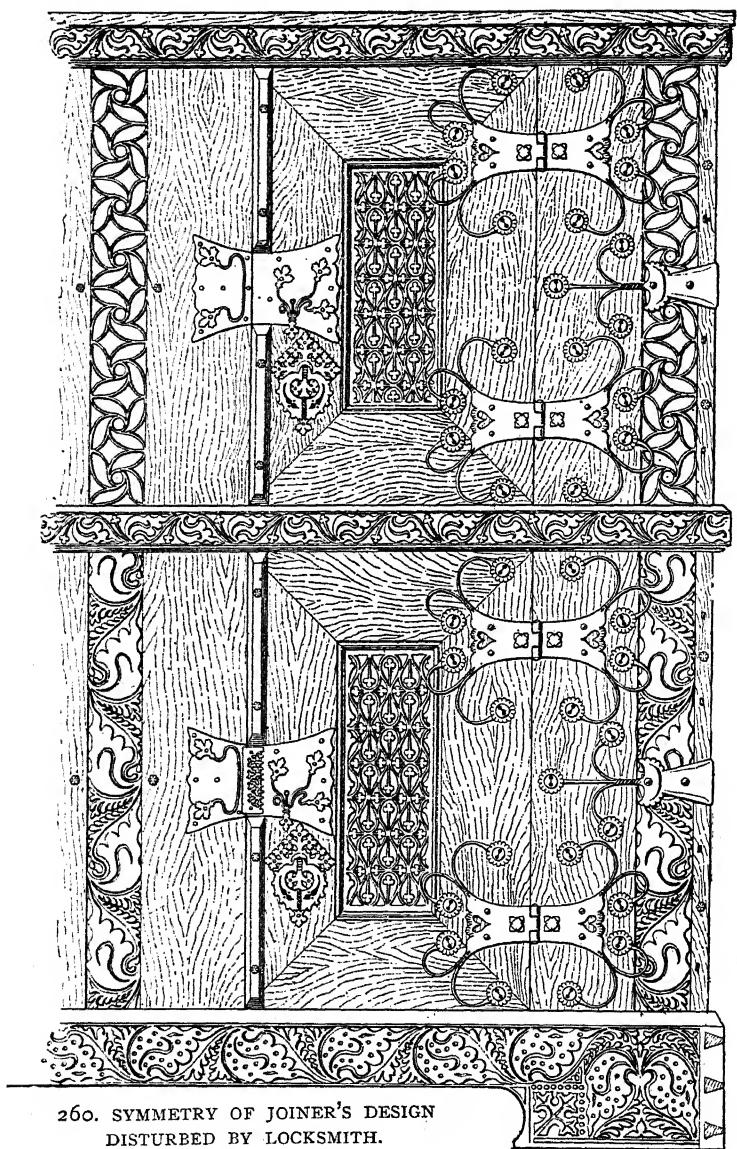
ceiling decoration we go to Rome to see have had Michael Angelo pay more heed to the building which he certainly treated with very scant respect? Has he not vindicated his right to flout construction such as that? A froward painter degrades, no doubt, a noble work of architecture when he takes it as the mere framework to his pictures. A great



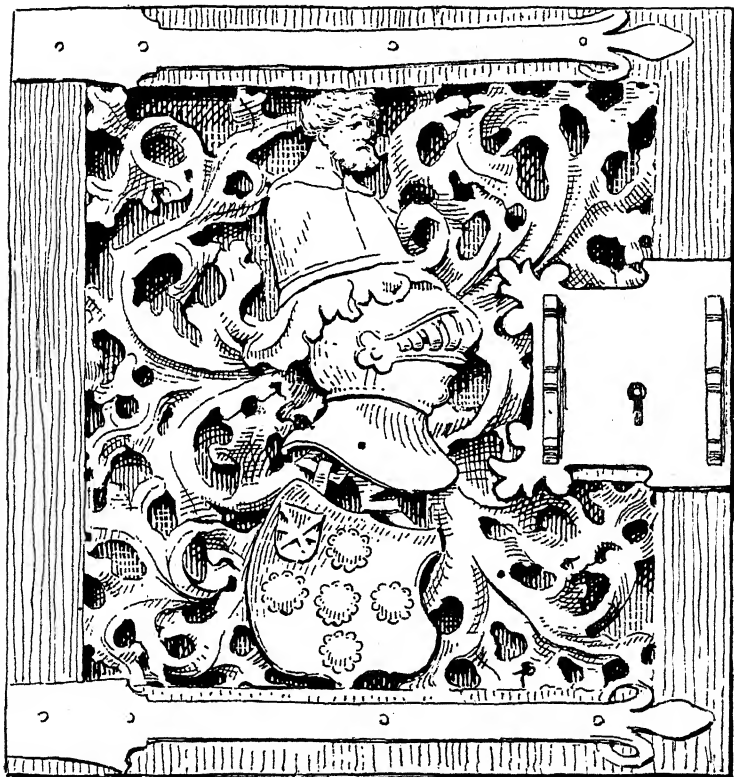
259. CORRECTIVE ORNAMENT.

artist, on the other hand, as surely glorifies a commonplace building by his contemptuous treatment of its poor construction. And so in matters of less moment. The natural function of ornament is to fulfil the idea of the man who first conceived the thing to be enriched. The lines and limits

of right decoration are properly laid down by him. The decorator goes beyond them at the risk of offending against good taste; and, assuming the ground lines to be worthy of respect, he is bound, in practice as in theory, to conform to them. On the other hand, assuming them to be of small account, there is no occasion to pay them a deference not their due. If the rafters of the roof (see opposite), occurring very much as the convenience of building may suggest, give panels not of satisfactory proportion, or result in stripiness, a decorator with the courage of his opinions will not hesitate to correct the proportion or to counteract the tendency. Why enforce or even preserve lines in themselves unpleasing? Why not, if possible, obliterate them? The dictum as to following lines of construction holds good only in so far as they are worth consideration. This may be heterodox teaching; it is none the less true. If existing lines are bad, a decorator worth the name will not hesitate to depart from them—to draw the eye away from them to something on which it can dwell with satisfaction. It rests with the rebel, of course, to justify the assumption that he is a better man than his ostensible master. He must succeed; or he lays himself open to the charge of disobeying conditions—a crime not to be pardoned in design. We are too much inclined to accept structural or other subdivisions as rigid limits of design. There are some who would insist that the separate lights of a Gothic window should be treated separately, and the design on no account run through from one to the other. This seems very much like ignoring the fact that the independence of the lights is at the best only relative—they form always parts of the window. To confine the decorator to the smaller limits is to put broad treatment out of the question. Of course the mullions of a window have to be taken into serious account; in proportion to his ambition the artist increases his risks; but, in spite of all, he has managed before now to come out of it triumphantly. It is just a question of



the man and his competence. Perhaps after all no law is broken, only some accustomed ceremony disregarded. It is not, for instance, in the nature of things that the two wings of a double door (261) should be designed as separate panels—



261. ONE WING OF A DOUBLE DOOR.

it takes the two wings to complete the pattern of the butterfly—they are only in a measure independent, only the two halves of a single door; their separate framing does not do away with that fact; and if an artist should see fit to lay more stress upon the pair of doors than upon their com-

parative independence, why not? Even in the case where a pilaster divides them, the cabinetmaker may be allowed to emphasise by his design the fact that they fold—which he does by designing them so that, though taken singly they are one-sided, jointly they form a symmetrical composition. The practice, adopted, for example, by Boulle, is very different from the later French fashion of ignoring the divisions of the drawers in a commode, and allowing them to cut ruthlessly through delicate ornament wilfully carried across them. In the Gothic cabinet on page 270 the joiner has framed his work symmetrically; but the smith has eventually taken the matter into his own hands, and boldly emphasised the sides of the cupboard by making much of his hinges. So far he is within his rights—but not when he goes on to carry his ironwork across the face of the carving. In the small cupboard door on page 271 carver and locksmith have worked harmoniously together. The two sides of a bookcover answer in a measure to the wings of a door—with this difference, that only one side is seen at a time. And yet the side of the cover may be designed so as to be incomplete in itself, the two sides being necessary to the symmetry of the composition. The need of clasps and hinges gave perhaps the hint of this treatment. It proves absolutely satisfactory (262). Imagination makes good what the eye does not see. We accept the binding as a thing complete in itself, though we only see half of it at a time; and we appreciate the way in which the opening of the book is acknowledged in design so obviously one-sided as to imply the other.

It is not by disregard of controlling forms that a designer succeeds ever in satisfying us with the unaccustomed. Critical opinion is appeased only when the thing that seems perhaps lightly done was the result of deliberate judgment. He must be a man of some account who can reconcile us to something which we did not think could safely be done until he showed us how. Such a man can afford to be

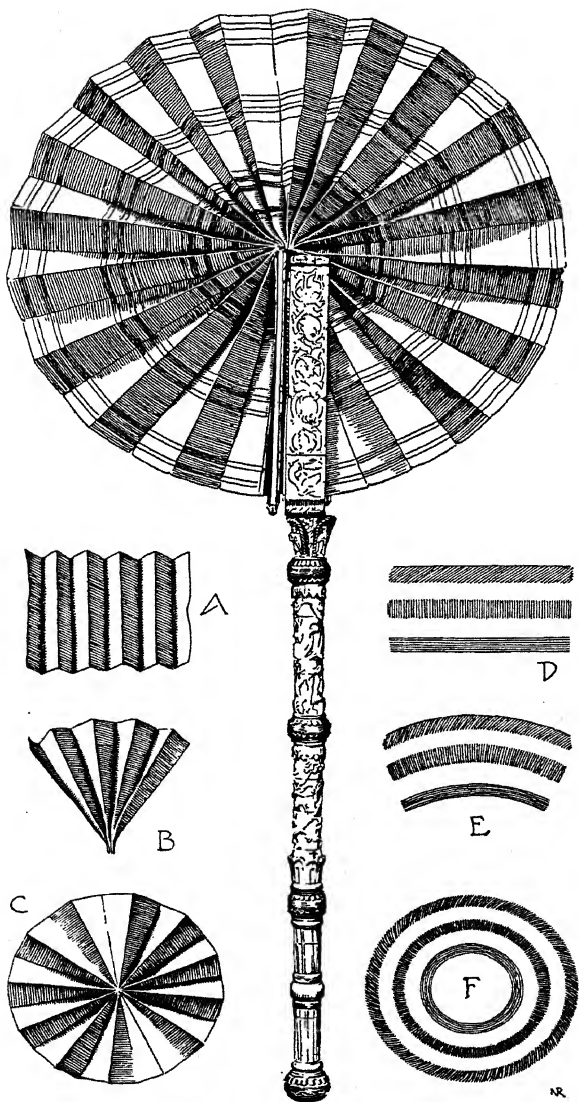


262. ONE-SIDED BOOKCOVER DESIGN.

venturesome. If he can go counter to what we have accepted as a rule, and yet give no offence, we may be sure it was not by accident but by deliberate design, very skilfully carried out. There is nothing careless or casual in design. Not even in the little art of ornament.

The space to be filled or the shape to be decorated (determined very often by circumstances quite beyond the control of the designer) is the only possible starting-point for the appropriate planning of design. Further than that it is not possible to say much that will be helpful to the designer. Happily the space or form itself is likely to suggest to the ornamentist the lines of ornament which will preserve and perhaps emphasise proportions that are already admirable, or amend what disproportion there may be.

That there are lines into which the decoration of a given space naturally falls is shown in the case of the circular shape. Do what he may the designer comes almost inevitably round to ornament which takes the form of rays or rings, very possibly of the two combined—as surely in fact as the pattern designer (see *Pattern Design*, pages 54 *et seq.*) is reduced to setting out his repeat on the basis of a rectangular lattice. In fact, as M. Henri Mayeux has pointed out (“*La Composition Decorative*”), rings and rays are to the circle what a lattice of square lines is to the rectangle. A strip of paper folded as at A, opposite, has only to be gathered together at one end as at B to give a fanshape, and a longer strip gathered together as at C would give the rayed circle. A striped band as at D wants only bending to give the concentric curved lines at E, and the process of bending has only to be continued, with a longer band, to give the ringed circle as at F. It will be seen that here are no new principles of design involved but only new lines, resulting from the adaptation of vertical and horizontal lines to the circle. The crossing of the two series of lines gives, as in the beautiful ceremonial



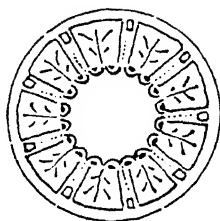
263. DIAGRAMS REFERRING TO THE DECORATION OF A CIRCULAR SPACE.



RINGED.



BISYMMETRIC.



RAYED.



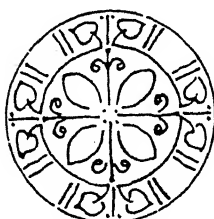
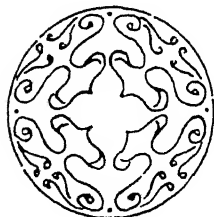
FLOWING ROUND.



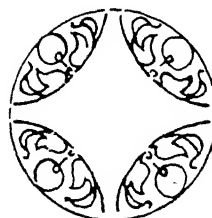
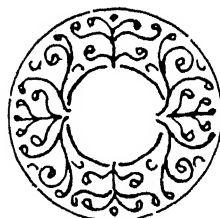
FLOWING TWO WAYS.



FLOWING.



CRUCIFORM.



DIAMOND.

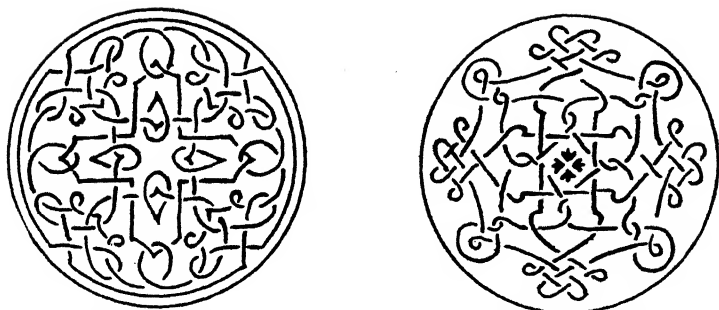


PENTAGON.



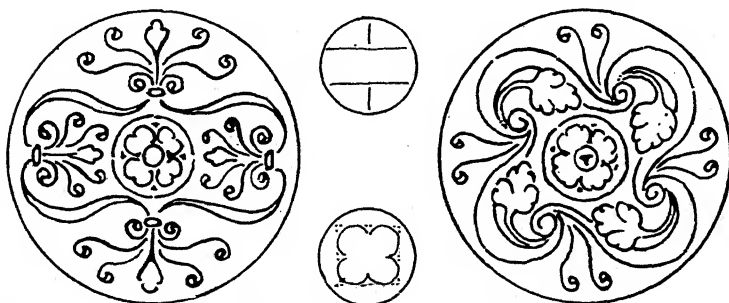
HEXAGON.

264. DIAGRAMS TO SHOW VARIOUS WAYS OF DECORATING A CIRCULAR SPACE.

265. RADIATING PLAN—UNIT $\frac{1}{8}$ CIRCLE, TURNED OVER.

fan from the Bargello (263), the interesting lines, which, as was said, are what a lattice of vertical and horizontal lines would be to a square. It is not suggested that the idea of decorating a disc in ringed and rayed lines was developed in the manner above described. That explanation of the relationship is only given to show how naturally the artist fell into them. As a matter of fact he had only to draw lines from the margin of his circle to its centre to get rays—only to describe line within line from the margin of his circle inwards to get rings. And it may be gathered from the inevitableness of such lines what a valuable scaffolding they are for design.

In most of the skeleton designs opposite (chosen as



266. TURNOVER AND FLOWING DESIGNS.

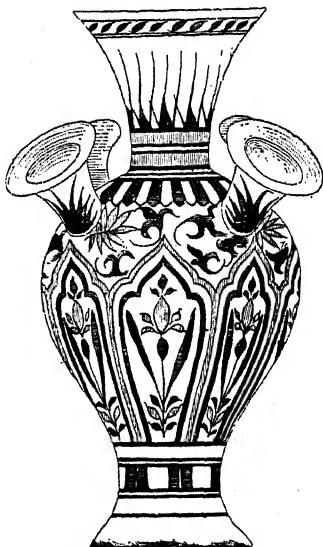


267. BANDWISE DECORATION.

—diamond, pentagon and hexagon (264), cross band or quatrefoil (266), and designing within or upon those lines.

There is no objection to the introduction of marked independent shapes within the circle—except (and it is a serious one) the difficulty of doing it satisfactorily. There is a danger always of awkward interspaces. It is so with any prominent form contradicting the space it occupies; there is great likelihood of irregular and ugly remnants of background. In the case of a space in itself awkward—spandril shapes for example are seldom very satis-

representative types) these lines are apparent—the cruciform patterns like those on page 277 being built up of eight radiating parts. Patterns flowing round, if they are at all compact, form of themselves rings. Other designs upon the page, not conforming to the typical lines, are arrived at by describing within the circle another figure



268. STRIPEWISE DECORATION.

factory—a prominent medallion or other regular and in itself pleasing form may so draw attention to itself that the framing shape falls into the background. This is just one of those cases where a bold decorator does right to assert himself—construction notwithstanding.

Corresponding to the natural lines of circle decoration are the stripes and bands on which the decoration of vases and other vessels circular in plan is most happily set out.

A vase is naturally decorated on the lines of its plan—in horizontal bands that is to say (267)—or on vertical lines (268)—lines, that is to say, each of which, separately, corresponds with its longitudinal section, though collectively they converge in the narrower and swell out in the wider parts of the vessel.



269. MEDALLIONS REDUCED TO CONVENIENT PROPORTIONS.

And lines in these two directions result so surely from the repetition of details across or down the vase that vase decoration may be described as ordinarily built upon the scaffolding of the double series of lines (130).

The form of a vase, cylinder, or any object of that nature seldom allows the introduction into the design of any pronounced form contradictory to it; for the self-evident reason that it disturbs the lines of the vessel, at the same time that it is itself distorted. This consideration has, however, been ignored by the Chinese; and European potters have been prompt to follow the worst peculiarities of their design.

The distortion of the picture on the curved surface of a vase is less objectionable than the discord between the harshly defined patch it makes and the shape of the vase itself. The vanishing view of the figures on it is to some extent condoned in the case of a band or frieze of figure-work. It does not at all events necessitate the placing of the vase so that no part of it is seen to great disadvantage. There is something pleasing in the idea of the continuity of a band of figures round the vase—and the band itself is an acknowledgment of the shape it decorates.

The difficulty of satisfactorily introducing into vase decoration anything in the shape of a medallion has been for centuries past attacked more often with valour than with the discretion which, according to the proverb, is its better part. A comparatively satisfactory instance occurs in the base of the candlestick on page 279, where the embossed medallions are discreetly reduced to about the size of jewels.

The cue of the designer is of course to introduce shapes which explain the form of the vessel, as for example in the melon-shaped or other such divisions commonly employed in metalwork, which lends itself to the beating up of such bulbous forms, contrasted often with delicate chasing or other rich detail (109, 110).

XVI. THE ADAPTATION OF ORNAMENT TO REPETITION.

The test of repeated pattern—Abstract form suited to repetition—Nature not enough, not necessarily the starting-point of ornamental design—Repetition as an element in composition—Forms not amenable to treatment in so far unsuitable for repeated ornament—Human and animal forms—Grotesque—Arabesque—Playfulness in ornament—Summary treatment.

A CONDITION of at least one kind of ornament—pattern—is repetition, which the artist unaccustomed to the restraint implied by it is not very ready to accept. He is given to indulge in compositions which, admirable as they may be in all other respects, lose by repetition. No doubt he schemes his lines and masses with a view to their recurrence, and to the forms they take in repetition—he would be no artist else—but he is disposed to regard all forms as equally available elements of pattern design. All is grist that comes to his mill. But what if the mill will not grind it? or if it should turn out something not to be kneaded up into consistent pattern-stuff?

That is a matter of taste, it may be objected. Not altogether, I think. Forms which, beautiful and interesting as they may be in themselves, lose their interest in repetition, fail to answer the test by which repeated pattern is fairly judged: does it gain by repetition?

The evidence of satisfactory pattern goes to prove that forms in order to be fit for reiteration must be abstract. The fact alone, therefore, that form is to be continually repeated demands departure from literal transcript in the rendering it.

Nature, however prodigal of repetition, repeats her forms with a difference. The simplest flower that grows may be incomparably more beautiful than any abstract ornament can possibly be. But what of that? If with each successive copy of it there evaporates (as there does) something of the charm which was in the original, until at last the stereotyped repetition of it becomes exasperating, that is surely a very good reason for not degrading it by repetition. It is not as in the case of nature's repetition where no two flowers are quite alike. Our business is to invent forms which shall not lose by repetition.

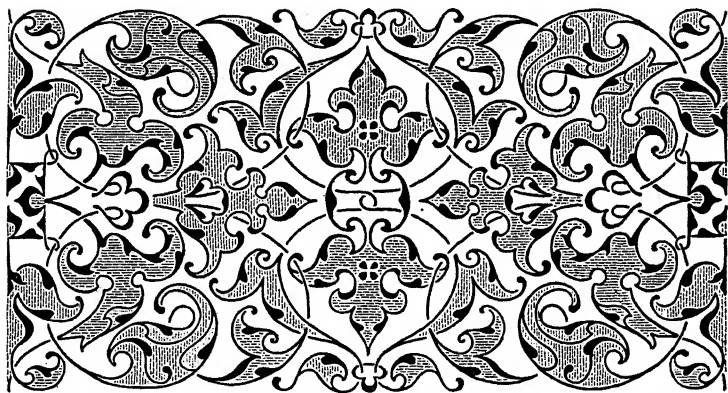
The very faculty of draughtsmanship (the designer's means of expression) exposes an artist to the temptation of aiming at natural representation. And there is not much in the way of public opinion to keep him in check. Most people are familiar enough with nature to take some interest in natural form, no matter how unsuited it may be to the purpose in hand; whereas, to appreciate in any degree the fitness of ornamental treatment argues some slight understanding of design.

Whoever can draw likes to make a good drawing and to carry it as far as he can. Drawing, however, is here not the end but only a means to it. The point of all-importance in applied design is the decorative result, the effect of the work in execution and in its place. The designer of repeated ornament is bound, in the interests of his design, to take into account its repetition; which means, if not to create his own forms, at least so to render the forms he borrows from nature as to make them gain by repetition and not lose. A capable workman conforms to decorative conditions not so much because he must as because he sees in their acceptance the surest way to success and to the full expression of himself. He submits therefore with a good grace.

There are yet other reasons for the choice of ornamental forms remote from nature, or for removing them from nature;

and chief among them the modest, and it may be inconspicuous, part which ornament commonly plays in the scheme of decoration.

It is so easy to go too far in the direction of naturalness. It is the direction natural to the untaught workman. He wants to show what he can do in the way of detail, texture, and so forth; and succeeds to perfection in showing the futility of such minutely natural doing. He has to learn that a *tour de force* is a sign of weakness, just as brag covers real cowardice. Why wish to carry naturalism to a point not



270. ORNAMENT NOT DELIBERATELY BASED UPON NATURAL FORM.

hitherto reached? It is probable there was very good reason why better men did not attempt it before. There were great artists among them, and men not without ambition, too. Was it merely that they were kept in check by conditions no longer binding upon us? Alas, then, for our freedom—to go astray!

The harm done by those who preach the sufficiency of nature as a guide in design is the more serious because their sermon flatters the vanity of all who have yet to learn what design is, or to realise that such a thing exists. Nature does

not teach treatment. It is by the study of art, and not of nature, that a man learns to omit the multitudinous details in nature which would attract attention he does not desire to call to them, to emphasise this feature and to subdue that, to modify form and colour according to his purpose.

The ornamentist very often does not even find himself deliberately upon nature (270). He draws his inspiration from nature of course ; but he starts continually from the decorative conditions ; and it is at *their* prompting that natural forms occur to his mind. So occurring, he may be sure that they come in appropriately modified form, unconsciously adapted to the purpose in hand. Thus in ancient Greece the vase painter arrived through the use of the brush at the device which we call honeysuckle pattern, and the sculptor came to clothe the joints of his scroll with foliation more or less reminiscent of acanthus leafage. In either case it was art which taught him the secret of design. High priests of nature from Ruskin downwards have omitted to insist upon this point—a vital one to design. They have on the other hand so persistently urged the claims of nature on the artist, and only nature's claims, that, though they may not in so many words have said that nature is enough, that is the impression left by their preaching on the minds of their disciples, who have somehow the infatuation that they can do great things in art without more knowledge of its principles than comes to them by instinct. Art is worth the wooing—and the way to her heart is not by holding on to the apron strings of Mother Nature. But to return to ornament and to repeated ornament in particular. The condition of repetition is imposed on pattern by the necessity of more or less mechanical execution (see Pattern Design, page 3) ; but, apart from any inducement of manufacture or economy, artists resort to repetition, not merely because the human brain cannot go on inventing without the comparative rest of manual labour, because it is a preventive against loose and rambling ornament, because

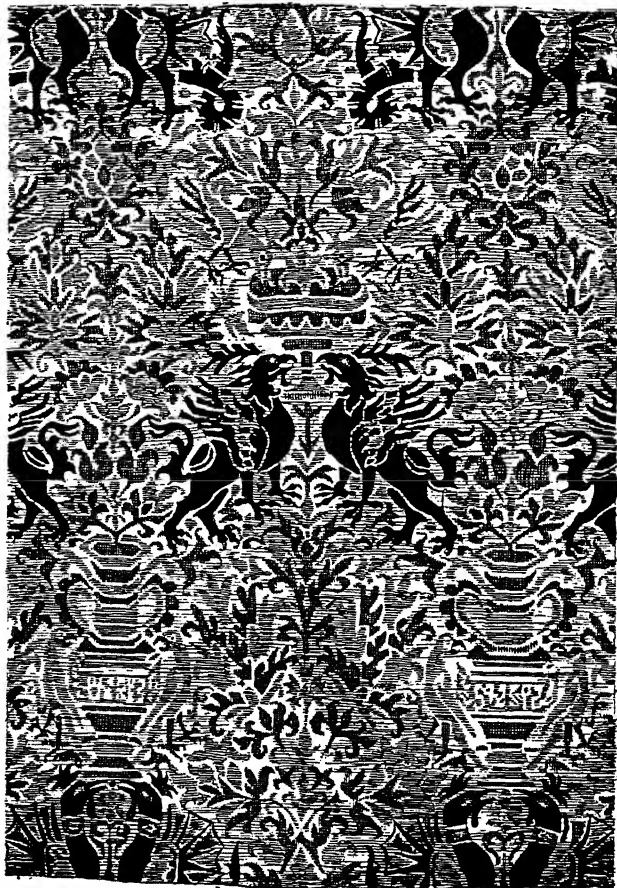
it introduces order into design and gives scale to pattern, but because it is in itself an element in composition with which he cannot dispense, and has no desire to do so. The



271. ORNAMENTAL USE OF FIGURE COMPOSITION.

only question is to what extent he may avail himself of it. And the answer seems to be: in proportion to the

character of his detail. The oftener form is to be repeated the more surely should it be removed from nature, and the further removed. Abstract treatment is in short necessary in order to fit natural form for the purpose of repetition, to reduce it to becoming reticence and make it serve the purpose of a background, which is practically what a great part of



272. RECURRING ANIMAL FORMS IN WOVEN PATTERN.

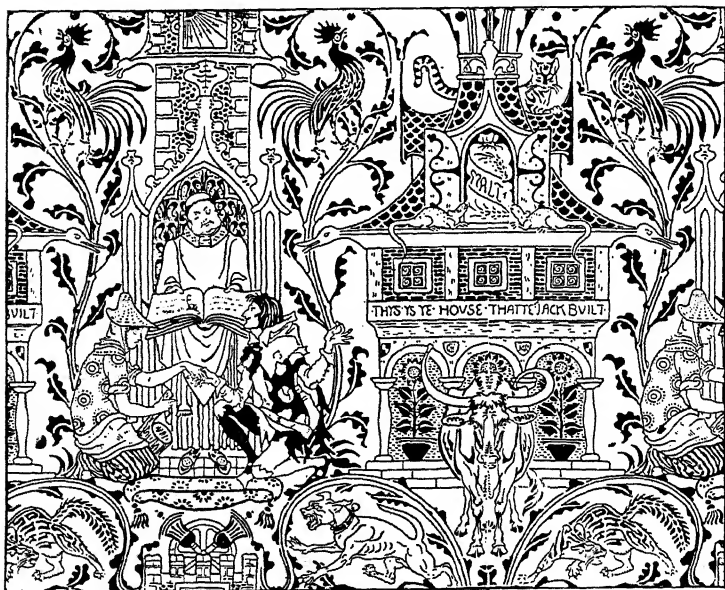


273. ANIMALS IN ORNAMENT BY WALTER CRANE.

repeated pattern ought to be. The further natural detail is removed from nature the more safely it may be repeated. Naturalistically rendered it will not bear so much as reduplication. It becomes, then, a question, in designing ornament, how far the forms employed as "elements" will bear the necessary modification. We cannot in reason take the liberties with animal form which we safely may with vegetable. The human figure, for example, is not lightly to be tampered with. It assumes, wherever introduced into ornament, such prominence that it can hardly be repeated without danger of offence. The picture of the "Assumption of the Virgin" in the Venetian orphrey on page 185 is so far lost in a shimmer of cloth of gold as not to be obtrusive at all; but it is less effective than a much simpler woven pattern would be; and when we look into it we are disappointed to find the same subject recurring throughout the length of the stuff.

The interest of a pattern is enhanced by the occurrence at

intervals of appropriate figures; but with every recurrence of the same figure, human or animal, its charm is lessened, until at last the obvious iteration becomes in most cases exasperating. And yet, in the face of old Byzantine, Sicilian, and other early woven patterns, with their recurring animals (272), and of Mr Crane's consummately ornamental patterns (273), it cannot be said that repeated animal (and even human) forms do not make satisfactory pattern. It seems, however, to be only on one of two conditions, either that, as in the aforesaid textiles, the creatures are so summarily conventionalised as to be remote from any living thing, or that, as in some of Mr Crane's designs, they are so lost in the general effect of surface richness as not prominently to assert themselves as figures. Modelled in very low relief, subdued in colour (as in the table damask on page 287), or cunningly interwoven with other



274. HUMOROUS USE OF FIGURES IN NURSERY WALL PATTERN.



275. INCIDENTAL ANIMALS IN ORNAMENT.

ornament, we accept them as giving satisfactory lines or masses not otherwise easily to be obtained in merely floral or arabesque ornament. Ornament has a way of being too monotonously ornamental; and the introduction of a bold mass, such as a figure (human or animal) readily gives, is too convenient a way out of the difficulty besetting the designer for him to refrain from it altogether, even though it should lead him, as it does, into the opposite danger.

Who is so straight-laced in theory as to find no pleasure in the nursery wall-papers of Mr Walter Crane (274), in which the charm of line, as graceful as it is cunning, is enhanced by the humorous rendering of the familiar rhyme? An artist with exceptional gifts of design, sufficiently at home with the figure to take liberties with it, may without unduly degrading it, turn it to the merest pattern-work. A man must be allowed now and again to lay aside artistic dignity and be frolicsome. Playfulness is quite within the sphere of ornament. Frivolity itself is at times more to the purpose than an everlasting seriousness.



276. GROTESQUE FORMS IN ITALIAN ARABESQUE.

Nevertheless, it is far better that animals in ornament should not be repeated, but as was the case in the less severely treated incidental animals in the incised border of which a portion is given on page 289, that the hunt should go gaily along without continual recurrence in the incidents of it.

In sedate pattern there is a strong *prima facie* objection to the repetition of living and especially moving creatures. The human or animal forms which we most readily accept are those which we do not at the first glance take to be more than ornamental forms. When we recognise the life in them we begin to regret their recurrence, or, what amounts to the same thing, the want of variety in them.

In a mechanically repeated unit variation is, of course, out of the question, and the advisability of introducing animals at all depends entirely upon the possibility of holding them in

strict subjection. It is by no means every artist who can keep them in their place. Where animal forms can be infinitely varied objection to them ceases to hold good. The grotesquerie of Italian arabesque (276) is for the time being out of fashion ; but the men of the Renaissance who peopled their scrolls with creatures, or grafted together animal and vegetable forms, did so in such a way as to convince you of their ornamental capacity. The result, pleasing or not to our modern taste, is unmistakeably ornament. You detect as your eye dwells upon the carving, living creatures among its leafage, or the scroll itself grows into fantastic life, the longer you look the more you see in it ; but it is first and last ornament, all the more attractive for the fancifulness or the mystery of its detail.

The animal form which makes satisfactory ornament is by men to whom it was easy and more amusing (natural, in fact, for all its artificiality) to play with such form, and who could handle it, and were content to handle it, according to the conditions of design.

Instances of living form so far removed by treatment from their prototype in nature as to be proof against criticism occur in ornament from the days of the Pharaohs to those of Alfred Stevens : and the lesson of it all is, that it should be of the simplest kind, spontaneous, done without effort, suffering no disadvantage from summary treatment. Neither in Greek vase-painting nor in Italian Majolica is accuracy of drawing a characteristic. Grace and spontaneity of brushwork in the one, richness of colour in the other, directness of execution in either case, and the restriction of the painter's effort to what his means will readily give—these are what we find, and what gives them their reputation and us our satisfaction in them as ornament.

XVII. THE POSSIBLE PALETTE.

The restrictions of technique a source of strength—Examples : Clay and pottery colour—Tin enamel—Coloured glazes—Blue and white porcelain—Effect of colourless glaze upon colour—Glass—Its natural colour—Stained glass colour—Dyes and colours—Their use in printing—The natural colour of materials—The quality of the colour medium.

COLOUR is controlled by technique even when it is not prescribed by it. The artist is not nearly such a free agent as he is supposed to be, and the colour schemes which we attribute, without thinking, to the individual or to his racial feeling, arise out of conditions as to which he had no say.

What he has done is to take advantage of them. He is free to drop out of his palette the colours for which he has no artistic use. He cannot add a colour to it—unless by chance he happens to be a chemist also.

That being so, it would seem incumbent on us to urge the man of science to unwearied experiment with a view to increasing our range of colour. It has been done, and the scope of the artist is continually being widened ; but not altogether to the benefit of art. The fact is that restrictions to which art has been subject are by no means the hindrance they are taken to be. They have proved a source of strength to the artist—giving character to his work, and a sort of oneness—not so easy to preserve with all the pigments of the artists' colourman to choose from.

Clay is a substance which has a good deal to say as to pottery colour. It burns for the most part to a yellowish, reddish, or grey colour, more rarely to a white. It may be

mixed, or stained with metallic oxides; but the colour of the clay is always felt in the tint so obtained, except where the natural earth is so much alloyed that the vitreous result scarcely deserves to be called clay. And it is not without a moral for us that, for example, very powerfully stained flooring tiles, such as the bright blue, clash horribly with the more sober hues proper to baked earth. These are in themselves harmonious, and make a useful palette, though too low in tone for many purposes.

Brighter colour is to be got in the form of enamel or of glaze, which is really glass, not clay at all. The colour of opaque enamel is determined by its composition. Oxide of tin turns glass a milky white in the fire—and affects the colouring matters mixed with it in much the same way as body white affects oil or water colour. The harsh colour of the Della Robbias was none of their choice, but the best they could do with tin enamel: they would have made their blue like lapis if they could.

In the same way the opacity of enamel is due to tin; and, what is more, the tin contained in brass or bronze clouds the colour. The Chinese enamellers, thanks to their much greater experience, could do things quite beyond the scope of sculptors experimenting in pottery; but they could not get the translucency to be obtained upon gold or silver. The lower tone of Japanese enamel as compared with Chinese is explained by a difference in the composition of the metal foundation.

The most beautiful pottery colour is that produced by more or less transparent glaze over a pale body, and its great charm is in its variety. Potters have done and still do their best to get rid of it; but the colourists among them have made the most of its incidental variety, not only in depth, according to the way it flows, but according to its "flashing" in the fire. They have taken advantage of the flow of the glaze and schemed that one colour should flow

into another, and reckoned on the chemical action of one glaze upon another to get effects of streaked and splashed and curdled colour—deliberately aiming at what was in the first instance pure accident. There is always some uncertainty about pottery colour; but one can rely at least upon the laws of gravitation, of chemistry, and to some extent upon the action of the fire, about which the inexperienced speak so hopelessly always. Where the amateur hopes for a happy fluke the man who knows his trade reckons upon a foreseen effect. He knows quite well what he is aiming at. A potter is working always more or less in the dark. It is not until it comes out of the kiln that he sees the effect of what he has done. But, though he is compelled as it were to fire blindfold, he does not shoot recklessly; and, according to his science and experience, he hits the mark.

Such, however, is the uncertainty of the fire that it is inexpedient to aim at colour depending for its effect upon precise relation of tone or tint. The painters of Sèvres sacrificed to flesh and flower painting qualities peculiar to vitreous colour. The Chinese porcelain painter, his Persian imitator and the Italian Majolica painter, knew better than that.

The beauty of blue and white is beyond dispute whether in Chinese porcelain or in the Persian and Dutch earthenware inspired by it. But blue was not so much the choice of the Chinese potter as the colour forced upon him by his method. Cobalt was the only powerful underglaze colour he could trust to stand the heat of his kiln. The red at his disposal was most likely to come out dull and smoky, the yellow was at best brownish, and the green no stronger than celadon. Even in on-glaze painting blue was the one colour which could be depended upon to sink into the glaze and be held there in suspension, so that one could see into its depths.

When it comes to polychrome on earthenware, the relative warmth of the Italian as compared with the Persian palette

is a matter not of Oriental and European temperament but of the composition of the glaze. The Italians aimed no doubt at Oriental colour, but the lead in their glaze turned the Persian turquoise to a greener shade, destroyed their purple, and developed, what the Persians could not get, brilliant tones of yellow and orange.

It is the same in other crafts. The green and yellow tints of glass, abandoned in favour of colourless "flint," were not the choice of early glassblowers, but the result of impurities in the sand employed in glassmaking. Directly the stained glass window painters discovered the means of staining white glass yellow, the whole tone of their windows was altered to a brighter and gayer key. White glass was accepted as a convention for flesh colour (much to the advantage of the work), because the only flesh tint procurable in potmetal was a rather unpleasant pink.

The dyer was no freer to choose his palette than the potter. William Morris made his own use of the tinctures employed from time immemorial in the East, but added nothing to them. The natural dye-stuffs are rapidly being displaced by the products of synthetic chemistry; but they give quite a different palette. And, when it comes to printing with them, they entail quite different processes, which in turn materially affect the artist's colour scheme. The fresh colour of an Eastern print is not to be got by modern processes of cotton printing—any more than the old-fashioned printer could possibly get the effects produced by some of our methods.

And the colour scheme is affected, too, by the consideration whether it is to be printed by hand or by roller, and whether the printings follow quickly one upon the other or whether there is time for the one to dry before the other falls on to it. Allusion was made on page 50 to discharge printing. That, again, affects the artist's colour scheme. There are only a limited number of dyes—indigo is one—which can

be trusted to discharge with certainty enough. And there is the question of the stuff to be dyed, which may have affinity with one dye-stuff and none with another.

The worker in natural materials has his palette still more rigorously set for him. The marquetry inlayer is confined not merely to natural woods but to woods which will shrink something like equally ; the pavement worker to marbles that will wear evenly. It was not purely out of affection for red and green that the Italians in their *Opus Alexandrinum* kept so faithfully to white marble, serpentine and porphyry.

Workers in distemper, in oil, in fresco, have each their own palette. It is a painter's business, perhaps, to get over that as best he can—his high pictorial purpose is not to be controlled by any such consideration. The purpose of the ornamentist seldom warrants his departure from the palette natural to his material. Its restrictions, if he only knew it, are a blessing in disguise.

XVIII. THE INEVITABLE LINE.

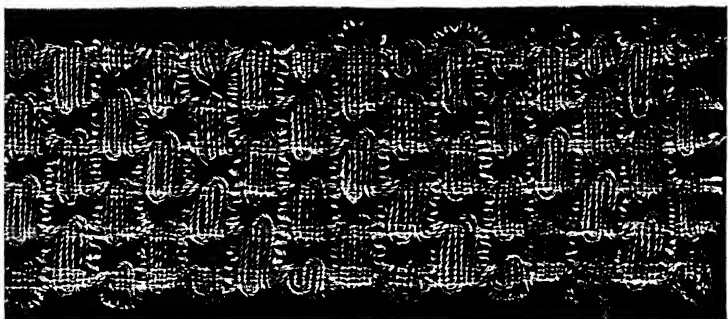
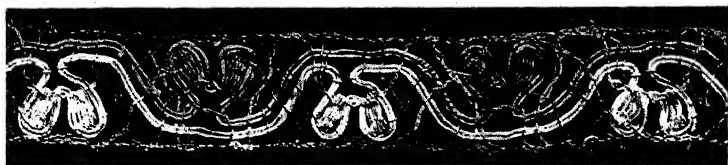
Line and outline in ornament—The quality of line determined by material, &c.—Precision of line essential—A hard line not always to be avoided—Designer accepts the line given him by his material—Examples: Thick lead lines in stained glass—Fine wire in cloisonné—Tooled outline to separate onlays of leather—Couched cord to edge appliqué embroidery—Outline detaches ornament from its background—Makes distant forms read plainly—Strength and colour of outline—Double outline—Hardening and softening effect of outline—Outline not a law but often a matter of expediency.

LINE is a subject upon which much has been written and more might well be said—of the meaning that may be put into line, its expression, that is to say, the stillness suggested by horizontal lines (we associate them with the horizon), the support expressed by vertical lines (they remind us of pillars that uphold), the stability of square lines, the life of lines suggesting natural growth, the movement of sinuous and undulating lines. And in close connection with considerations more or less sentimental there is the practical question of the value of line in composition, the way straight lines steady the design and flowing ones enliven it, of the lines resulting in repose or restlessness. As to the value of line in *ornament* there is no possible doubt. Painters may be right or wrong in their new found determination nowhere to find lines in nature. That they exist there no one with sharp sight will deny, though to defective vision everything may seem blurred. "Pour bien voir," said Carolus Duran, "il faut fermer les yeux!" If

that is not true, there is truth in it—for the painter. But, whatever the charm of soft contours in painting, the decorator and especially the designer of ornament has often no choice in the matter. He cannot take refuge from precision in short sight. Detail that is to be woven in damask (277) or laced together in braid or passementerie (278), to be inlaid in wood (279) or marble (151) or onlaid on silk (219), to be put together in cubes of glass or coloured stones, to be fretted (280), stencilled, damascened, or etched (281), compels an outline, and one of a peculiar quality too. So that, if it were true (which happily it is not) that there are no lines in nature, the first business of the designer would be to invent them. He would have straight-way to translate forms derived from nature into line of the firmest and most definite description.



277. LINEN DAMASK PATTERN.



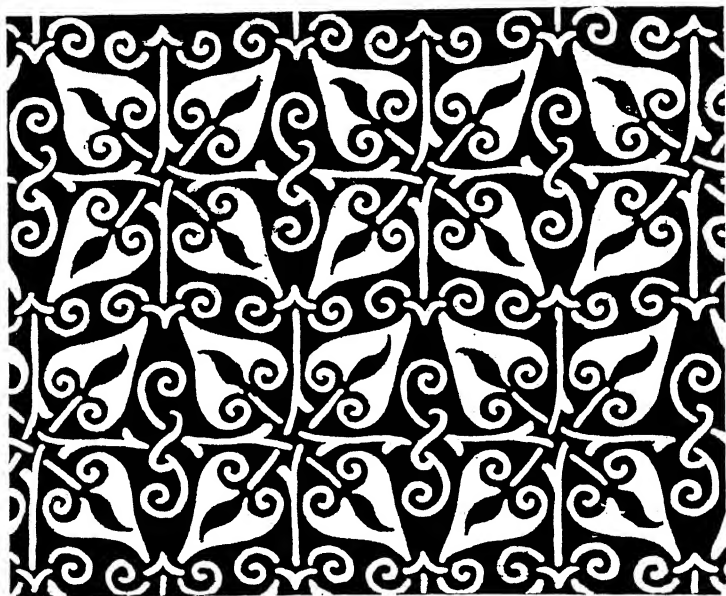
278. GOLD BRAID OR PASSEMENTERIE.

The quality of line in ornament depends (as will presently be seen) in great measure upon the material used and the way it is worked ; but these of themselves almost invariably demand that it should be definite and firm. The artist must accept it as a condition of his art. Any attempt to disguise it shows weakness—whereas the bold use of it gives character, a valuable element always in ornamental design.

Not the least advantage of uncompromising outline is that it compels the simplification of natural form, already a step towards the breadth so needful to unity of decorative effect.

Even where hard outline is no condition of the case and would in fact be hurtful in the finished work, the designer is not free from the necessity of outlining his forms

and that precisely. In practical design a vague outline is of all things to be avoided and at all cost, at the cost even of hardness in the drawing (compare *Pattern Design*, page 255). For it tempts the designer to shirk the difficulties of draughtsmanship, to shift them, that is, on to the shoulders of the executant: since, somewhere in the process of workmanship or manufacture, they have to be



279. INLAID PATTERN—L. F. D.

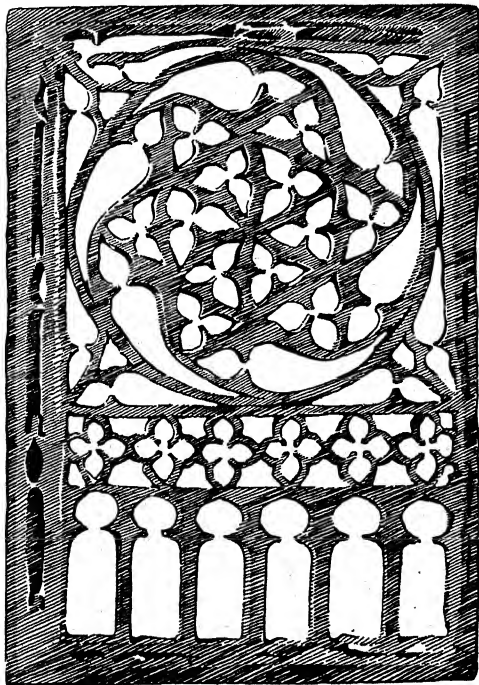
encountered. It is quite a common occurrence to hear artists who have fallen short of fulfilling their part of the undertaking throw blame on the workman for not satisfactorily doing what they themselves ought never to have left undone.

Vague forms, in which perhaps there is a hint of something the artist is naturally loth to let go, do not lend

themselves to reproduction. The workman is, presumably, from his very position as workman, not the artistic equal of the designer (or is the artist willing to share his credit with him?)—he wants a line to work to. And it is the designer's business to give it him. If in outlining his forms he hardens them, better that than their rough treatment

by another and less sympathetic hand. No one will murder your work so tenderly as yourself.

Sure consolation awaits the designer who has the courage to make his design such as the available workman, and the machine perhaps after him, can render. He will find in the work executed from it, if not the quality sacrificed in his drawing, compensation it may be even more than equivalent. The light shining through stained



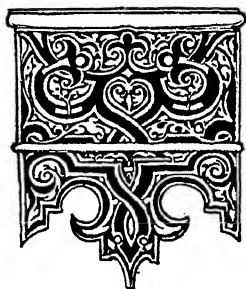
280. PIERCED OR FRETTED ORNAMENT.

glass will soften the harsh lines of leading, the bright cloisons of enamel will give quality to the colour, the corded outline to appliqué embroidery will not follow the hard lines of his drawing so precisely as to look inappropriate to stuff, the gloss of silk or the sheen of linen damask will redeem the forms

he drew with such uncompromising precision for the "point paper" draughtsman's guidance, even though the jacquard loom did not of itself sufficiently blur them. The practical designer distinguishes himself from the unpractised by the scrupulous care with which he defines in his drawing not merely the outlines of his forms but the limits of each separate colour or shade of colour entering into it. The fear alike of amateur and painter is of hardening the effect: what the designer fears, seeing beyond his drawing, is lest the workman following him shall not have lines definite



281. DESIGNS FOR
ON STEEL



ETCHED ORNAMENT
OR IRON.

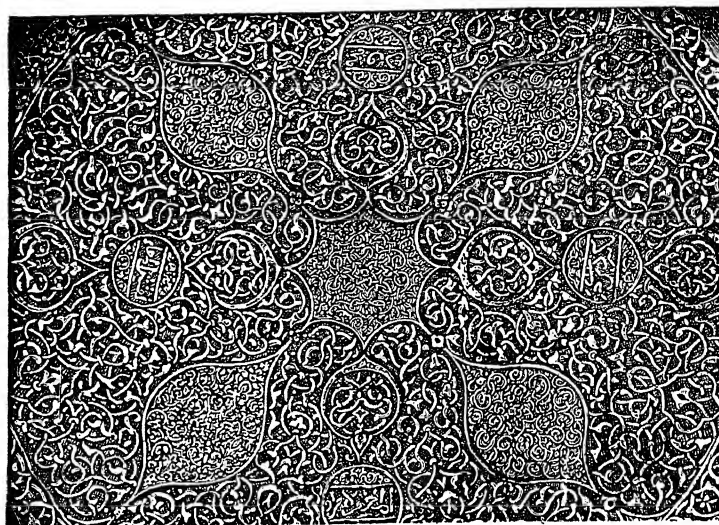
enough to go upon. He knows how easy it is to soften them in the finished work, even if the fabric itself does not do that for him. Precise lines such as those in damascening do not in the result lead to hardness of effect. In fact it is not easy in the mingled shimmer of bright bronze and silver to make out the intricate pattern of the Kurdish ornament overleaf (282), for all the precision of its outline.

In design for manufacture, to be woven, say, or printed, the softening a hard line is simply a question of choosing the

colour—all-important, it is true, but a thing the colourist does, when the time comes, without thinking about it.

The workmanlike use of a material if not actually the material itself may, as I have said, not only imply the use of an outline but determine its character. A practical man knows that, and, far from being afraid of it, relies upon it for continual help. He reckons with and makes much of the thickness of the lead in his design for glazing, and throws the outlines of his design into them (283), he takes advantage of the fine edge of the flat wire forming cloisons for his enamel. Cloisonné enamel is distinguished from champlevé not only by the fact that the one inveigles the artist into linework and the other makes him chary of it: the wiry quality of the cloisonné line is quite different from a narrow strip of metal left in relief by the cutting away of the ground on either side of it. Moreover the evenness of the cloisonné line justifies itself when we realise that it is in fact the edge of the metal tape used to build up the walls of cells in which vitreous pastes of various colours are confined and kept apart.

Gold tooling makes the best possible outline to painted ornament on leather (284), and when the binder took later to inlaying or onlaying coloured leather, it seemed to be specifically designed to mask the joints. So the embroidress overlays the edges of appliqué with a line of cord, or threads of gold, or strands of soft filoselle, giving perhaps to this last the appearance of beading by the way she allows it to expand between the close-set, tight drawn points of couching; and so the worker in appliqué sews it down with buttonhole or chain-stitch (285), each of which has a character of its own. The leather-worker, it will be seen, uses a line of chain-stitch for its own sake also, apart from appliqué, and the worker in silver thread (286), depending almost entirely upon line, makes use of the returning outline to get a double line of couching strong enough for the stalk. It will be seen, too, that the turning of the thread gives a rounded line where another



282. DAMASCENED ORNAMENT IN SILVER UPON BRONZE.

material would have given a pointed one. A Spanish worker of the period would most likely have made it turn over in a characteristic little loop at the points. It is always as well to follow the lead of the material—one's partner in the game—and always a mistake to play entirely from your own hand.

Even in work executed with his own hand, and where there is no controlling condition of method or manufacture, an artist finds continual occasion to employ an outline. Decorative art is a kind of shorthand, depending very often for its effect and for its intelligibility upon precision of emphasis. Art of the over-delicate or super-subtle kind is often lost; and decorative art, unpopular as it may be, is essentially popular art: it must tell its tale in words that he who runs may read.

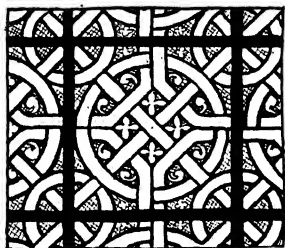
Seeing, then, that the resources of the painter are often

denied to the decorator, that he is not always free to indulge in light and shade, strong modelling, or other means of giving effect to his design, outline is the very thing to detach it from its background. And it is wonderful how effectually even a very slight and slender line will serve.

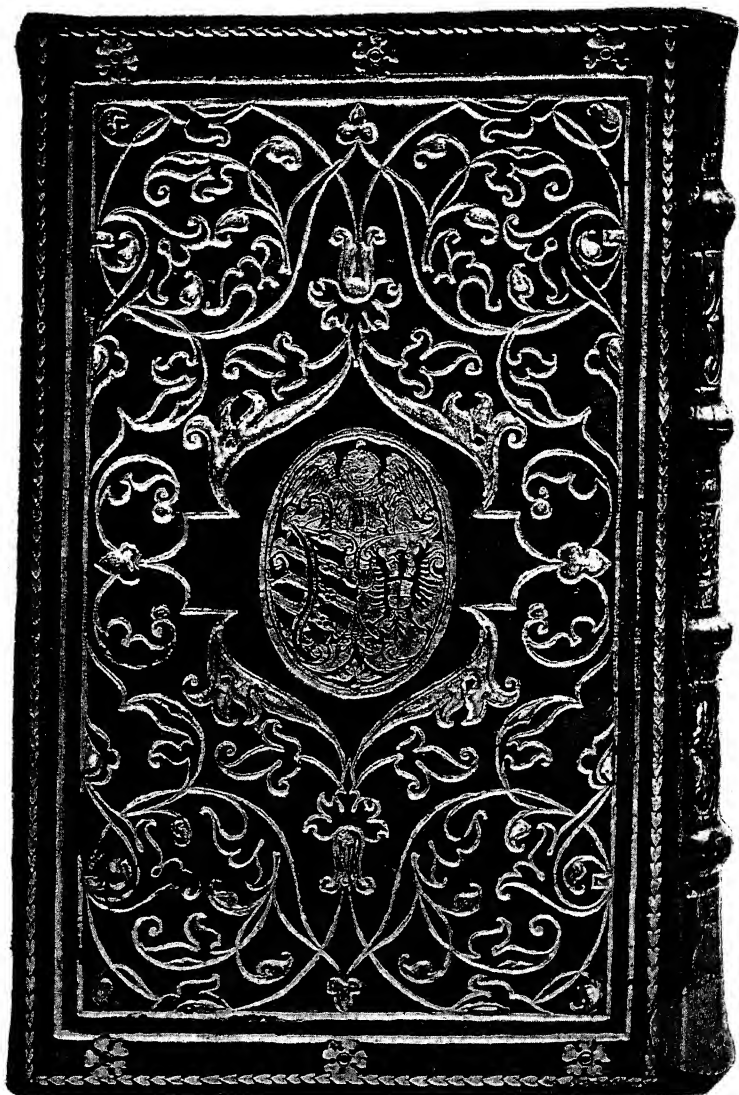
For distant ornament not in strong contrast to its ground outline is hardly to be dispensed with, and the further it is from the eye, and the less the contrast of tone, the more it calls for outline.

A decorator finds sometimes that the ornament he has designed with care does not read from where it is seen. There are two ways of making it clearly legible. He may detach his pattern from the ground by deepening the one or lightening the other, or by intensifying both. But he had presumably a definite purpose in determining the depth of the colours employed in the first instance, to alter them would perhaps entirely upset his scheme. The expedient of an outline has no such disadvantage, and it is ready to his hand. It enables him, in fact, deliberately and safely to adopt a scheme of colour which but for it would be altogether ineffective.

It is seldom, of course, that an artist resorts of his own free will to an even and unvarying outline. Mechanical precision, so dear to the manufacturer, is not his ideal of finish. There is some play in his line always: he varies it, but not with the idea of expressing by it more than outline will properly give; he does not fall into the vulgarity of thickening it on one side and thinning it on the other to suggest light and shade. His variation is spontaneous and impulsive; it happens to him to lose it here and there,



283. GRISAILLE GLASS IN WHICH THE MAIN LINES OF THE PATTERN ARE GIVEN BY THE GLAZING.



284. COLOUR OUTLINED WITH GOLD TOOLING.

to find it again, perhaps to enforce it. It comes partly of the stroke of the brush, the sweep of the gouge, the turn of the modelling tool. As with the strength of an outline so with its colour. By no means need it be all of one colour or one depth of colour.

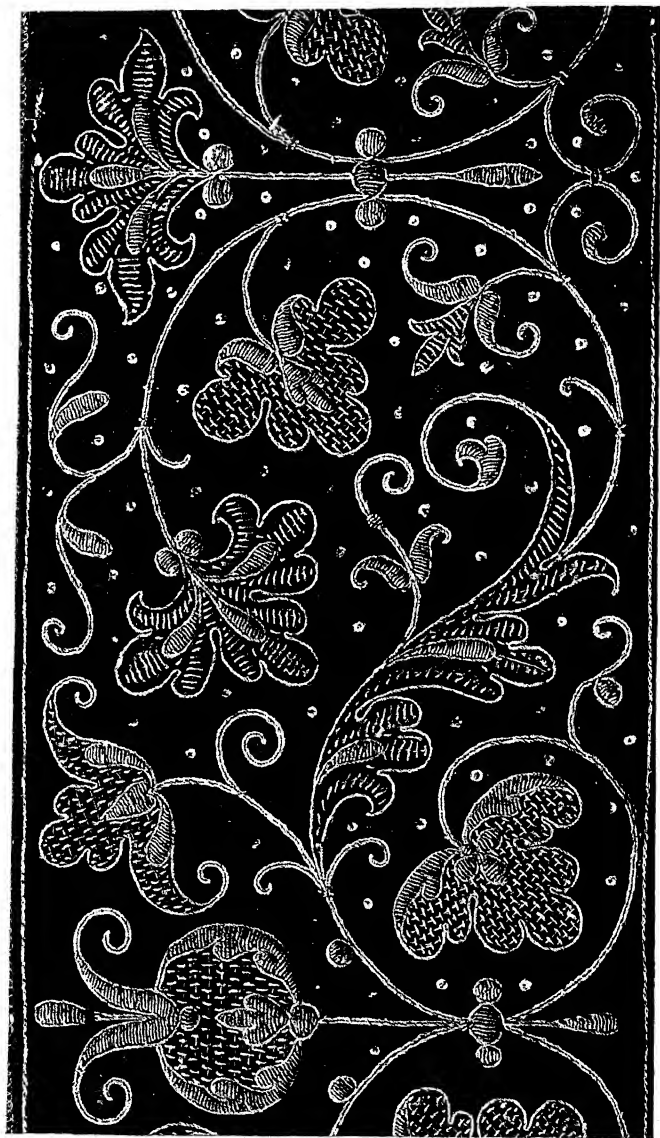
The best outline is that which at the same time that it gives the impression of the thing represented (in so far as impressionism is the aim of every artist) has also the character which comes of the manner of the work in hand. A subtlety not often enough employed is to outline ornament constant in colour throughout with various colours bright enough to qualify the general tint.

A double outline gives occasion for the use of two separate colours, the one chosen with an eye to the pattern colour, the other to that of the ground, and each with due reference to the other. This has sometimes been very cunningly employed in appliqué embroidery.

The harsh effect resulting from hard strong outline may be counteracted by an outline *upon* an outline—a very broad outline, that is to say, in half tint, and upon that a fine line as deep as need be. It gives somewhat the effect of a line that has accidentally spread, with the advantage, however, that the spreading is absolutely under the control of the artist.



285. LEATHER APPLIQUÉ OUTLINED WITH CHAIN-STITCH.



286. LINEWORK IN SILVER THREAD.

A man draws in outline perhaps because he has a pointed instrument to work with, perhaps because it gives him the quality of form he wants. He outlines forms already drawn for one of two definite purposes—usually to emphasise them, sometimes for the diametrically opposite purpose of blurring them. Ornament telling light upon a relatively dark ground would be further pronounced by an edging either of lighter colour upon the ornament or of darker upon the ground; the contrast between the two would be



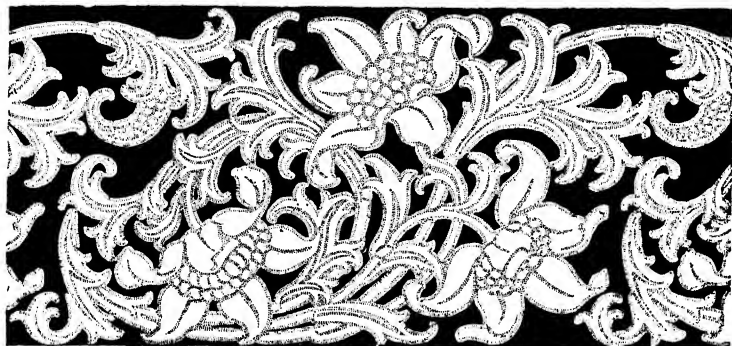
287. VELVET WITH SOFT OUTLINE OF "TERRY."



288. HARDENING EFFECT OF OUTLINE.

intensified by this darker or lighter outline. On the other hand an outline intermediate in tint between the ornament and its ground would soften the effect, as may be seen in many a velvet pattern in which the "terry" effectually prevents any too great contrast between the rich pile and the poorer satin (287). The hardening and softening effects of outline are shown in two renderings of the same design. In the one (288) the white ornament upon a tinted ground is made rather rigid by a hard black outline. In the other the white ornament (289) upon a black ground is blurred by outlining in a soft tint.

The colour of an outline is sometimes given by the material—the dull lead which holds together a stained glass window, the grey cement in inlaid flooring, the gilt cloison of enamel, the silver wire of damascening. Where it is not, it is a ready means of bringing tones together or detaching them one from the other. A network of gold lines harmonises the harshest contrasts of primary colours. An outline in a deeper tint of the local colour, say red on flesh colour, strengthens it considerably. A grey outline cools it. The crudest colour may be used for outline with the result simply of lighting up the effect where a lower tone would have dulled it.



289. SOFTENING EFFECT OF OUTLINE.

Outline is of such use in ornament and so often useful that it has come to be regarded as the necessary passport to decoration. The saving faith in it has been preached as though it were a dogma of design. It has been taken for the outward and visible sign of fit treatment, not merely removing art from the pictorial but stamping it with the hall-mark of decorative propriety.

This insistence upon outline for the sake of outline is worse than pedantry; and the effect of it is but to degrade it to something like the trade-mark of the decorating shop. There is no law of art or decoration making outline compulsory. Does the occasion demand it? that is the question and the only one. Design may quite well be decorative in which there is no insistence upon outline. The artist must decide, and in each case decide afresh. The real truth is that outline where it is not necessary to construction is just a matter of expediency and no more. In view, however, of the conditions of reproduction, and especially of the prompt and economic production of modern ornament, the expedient may safely be described as necessary. We have not only to put up with it, but to make the best of it, and to turn it to all possible use.

There we come back to the very nature of design. If it is true, as I began by saying, that, apart from its application, there is properly no such thing as ornament, it follows that, personal as may be the work of its designer, it is still the outcome of conditions, the solution of a problem set by circumstances outside himself. It is his only in so far as he works it out in his own way. He will bring to it what is his to give ; but his art is the art of making the best of it.

INDEX.

	PAGE		PAGE
ACCIDENTS - - -	146	BOOKCOVER (two-sided) - -	272
ACCOMPLISHMENT - - -	130	BOULLE - - -	224, 272
ADAPTATION - - -	1, 126, 127	BOXWOOD - - -	161
ADDED ORNAMENT (its danger) -	232	BRASS NAIL WORK - -	230, 231
"AGATE WARE" - - -	68	BRICKWORK (enamelled) - -	4
ANIMAL FORMS - - -	287, 288, 290	"BRIDES" - - -	214, 215
APPLIED ART - - -	14 <i>et seq.</i>	BROCADE - - -	44, 46
APPLIQUÉ EMBROIDERY - - -		BRONZE - - -	20, 109
	162, 301, 303, 307	" FOUNDER (the) - -	109
APPRECIATION OF MATERIAL -	28	" WORKER - - -	18
ARAB ART - - -	24	BROOCH - - -	17
ARABESQUE - - -	101	BRUSHWORK - - -	50, 291
ARCHITECTURE - - -	91, 93	BUCKINGHAMSHIRE LACE -	54
ARMOURER'S WORK - - -	170, 171	BULBOUS FORMS - - -	114, 280
ARRAS - - -	133	BURGES (Wm.) - - -	247
ASSYRIAN - - -	62, 73		
		CABINETMAKER (the) - -	272
BALANCE - - -	266	CALICO - - -	48
BAMBOO - - -	20	CAPITALS (Lombard) - -	75
BANDWISE DECORATION - - -	280	CARPET - - -	40
BASALT - - -	106	CARTOUCHE WORK - - -	180
BASKET-WORK - - -	78, 130	CARVED INLAY - - -	234, 243, 244
BEATEN METAL - - -	114, 125	CARVER (the) 99, 106, 108, 178,	272
BECCAFUMI - - -	162	CARVING 98, 105, 110, 115, 125,	252
"BIDRI" WARE - - -	191, 192	" (French) - - -	102, 179
BIG PATTERNS - - -	48	" (Indian) - - -	101
"BISCUIT" - - -	153	" (ivory) - - -	106, 108, 198
BLACKSMITH (the) - - -	108, 171, 226	" (stone) - - -	103, 104
BLOCK PRINTING - - -	50	" (wood) - - -	99 <i>et seq.</i> , 188
BLOWN GLASS - - -	119, 236	" À JOUR - - -	203
BOHEMIAN GLASS - - -	238	" AND MODELLING 98,	115
BOOKBINDER AND METALWORKER	247	CAST METAL - - -	108, 109
BOOKBINDER'S TOOLING - - -		CASTING (clay) - - -	93, 144
	84, 126, 127, 178, 229, 247, 303	CELADON - - -	146

	PAGE		PAGE
CEMENT INLAY - - -	158, 162	DAMASCENING - - -	191, 302
„ VEINING - - -	123, 226	DAMASK - - -	46, 48, 301
CEREMONIAL FAN - - -	274, 277	DAWSON (Mr and Mrs) - - -	164
CHAMPLEVÉ 192 <i>et seq.</i> , 226, 254, 303		DELLA ROBBIA - - -	248, 293
CHASING - - -	108, 114, 280	DESIGN 29, 46, 52, 56, 58, 61, 71, 98,	
CHECQUER - - -	80	260 <i>et seq.</i> , 302, 305	
CHINA CLAY - - -	151	DESIGNER AND EXECUTANT - - -	88
CHINESE CELADON WARE - - -	146	DETAIL - - -	48
„ EMBROIDERER (the) 41, 42		DIAPER - - -	183, 210
„ GLASS - - -	237	„ WORK (punched) - - -	113, 114
„ PORCELAIN - - -	294	DIAPERING (minute) - - -	87
„ POTTERY - - -	293, 294	DIRECTNESS - - -	88, 101
CHIP CARVING - - -	99, 111	“DISCHARGE” - - -	50, 295, 296
CHISEL (the) 73, 99, 105, 108, 125		DISTEMPER COLOUR - - -	51, 52
CIRCULAR SPACE (decorating)		DISTRIBUTION - - -	265, 266
274 <i>et seq.</i>		DOOR - - -	17, 247, 271
CLAY 19, 28, 93, 115, 116, 127, 141,		DOTS - - -	48, 50
149, 182, 238, 292, 293		DOTTED LINE - - -	229
CLOISONNÉ ENAMEL		DOUBLE OUTLINE - - -	307
194, 195, 198, 199, 301, 303		DRAUGHTSMANSHIP - - -	282
COLOUR - - -	293 <i>et seq.</i> , 310	DRAWING - - -	282, 291, 302
„ (distemper) - - -	23, 51, 52	“DRAWING” - - -	108
„ AND RELIEF - - -	248 <i>et seq.</i>	DRAWN-WORK - - -	52
COLOURED GLAZES - - -	62, 63, 64	DRILL (the) - - -	103
COMPOSITION - - -	260, 261, 297	DURAN (CAROLUS) - - -	297
CONDITIONS 1, 22, 23, 30, 52, 87, 88,		DUTCH EARTHENWARE - - -	294
90, 91, 284		DYEING - - -	50, 295
CONVENTION - - -	37, 38, 130	DYES - - -	295, 296
CONVENTIONAL TREATMENT 6 <i>et seq.</i>			
“CORDONNET” - - -	61	EARTHENWARE 28, 93, 127, 145	
COSMATI MOSAIC - - -	123, 180	„ (Dutch) - - -	294
COTTON PRINTING - - -	23, 48, 50	„ (English) - - -	68
“COUCHING” - - -	229, 303	„ (glazed) - - -	4, 63, 116
COUNTERCHANGE - - -	65, 224	„ (Persian) - - -	50, 294
COUNTING THE COST - - -	90	EBONY - - -	65, 159
“CRACKLE” - - -	146	EGYPTIAN CARVER (the) - - -	106, 108
CRANE (Mr WALTER) - - -	288, 289	EMBOSSSED DESIGN - - -	113
CRETONNE - - -	50	„ LEATHER - - -	115
CRYSTAL - - -	110	„ LEATHER PAPER - - -	128
CUNEIFORM - - -	73, 182	„ METAL - - -	114, 115, 280
CURTAINS - - -	52	EMBOSSING - - -	113, 114, 127, 280
CUT GLASS - - -	111, 119	EMBROIDERY 41, 42, 56, 58, 162 <i>et seq.</i> ,	
„ LEATHER - - -	111, 112, 178	220, 224	
„ WORK - - -	52, 87	EMPHASIS - - -	266
CYPRESS WOOD - - -	158	ENAMEL 192 <i>et seq.</i> , 241, 244, 301, 303	

	PAGE		PAGE
"ENCAUSTIC" TILES - - -	197	GLASS (stained) 244, 262, 295, 301	
ENGLISH EARTHENWARE - - -	68	,, (Venetian) - - -	28, 237
,, TANKARDS - - -	19	,, MOSAIC - - -	123, 252
ENGRAVING - - -	159, 189, 196	,, ON GLASS - - -	234 <i>et seq.</i>
EXCESS - - -	175	,, PAINTER (the) - - -	183, 244
		,, SHAPES - - -	146
FACETS - - -	III, 123	GLAZE - - -	62, 63, 64, 147
FIBULA - - -	18, 198	GLAZED EARTHENWARE - 4, 63, 116	
FILIGREE - - -	199	GLAZIER (the) - - -	17
,, AND WROUGHT IRON	226	,, AND GLASS PAINTER - 244	
FILLING STITCHES - - -	52, 54	,, AND MOSAICIST - - -	245
FINISH - - -	130, 135, 145, 305	GOLD - - -	26, 28
FINISHING PROCESSES - - -	144, 145	,, AND SILVER THREAD	228, 303
FIRE (the) - - -	294	GOLDSMITH - - -	18, 226
FITNESS - - -	129	GOLDSMITH'S WORK	
"FLASHING" - - -	293, 294	96, 98, 126, 179, 199, 233	
FLAT TREATMENT - - -	262	GOLD TOOLING (<i>see</i> Tooling)	
FLAXMAN'S MODELS - - -	239	GOUGE (the) 99, 100, 105, 127, 241	
FLEMISH GRILLE - - -	206	GRAIN OF WOOD - - -	100
FLINT GLASS - - -	III, 295	GRANITE - - -	106
FLOATS OF SILK - - -	44	GREEK LACE - - -	52, 126
FORGE - - -	165, 169	,, LETTERS - - -	73
,, AND FOUNDRY - - -	109	,, VASE-PAINTING - - -	291
FRENCH CARVING - - -	102, 179	GRÈS - - -	4
,, WALL-PAPER - - -	129	GRILLE (Flemish) - - -	206
FRETSAW (the) - - -	203, 207, 223	GRINDING GIBBONS - - -	101, 102
FRETWORK 61, 170, 204, 207, 243		GROUNDING OUT - - -	157, 161
,, AND STENCILLING		GROWTH - - -	10
	208, 209		
FRIVOLITY - - -	289	HANDLES - - -	19, 20, 21
FURNITURE COVERINGS - - -	52	HARD PRECISION - - -	119, 123
FUSSY PATTERNS - - -	46, 48	HINGE - - -	108
		HISTORIC STYLE - - -	2, 70, 71, 168
"GADROONING" - - -	127	HUMAN FIGURE - - -	287, 288, 290
GALLÉ (M. ÉMILE) - - -	234		
GEOMETRIC MOSAIC - - -	120, 123	IMITATION - - -	81, 126, 128, 129
GERMAN SILVERSMITH'S WORK	19	INCISED PATTERN - - -	147, 187, 189
,, WOOD CARVING - - -	103	INCRUSTATION - - -	233
GESSO - - -	117, 119, 251	INDEPENDENCE - - -	132
GLASS - - -	149, 244, 245, 295	INDIAN CARVING - - -	101
,, (blown) - - -	119, 149, 236, 246	,, LACQUER-WORKER (the)	9
,, (cut) - - -	III, 119	,, LEATHER-WORKER - - -	162
,, (flint) - - -	III, 295	INDIVIDUALITY - - -	5, 31
,, (marbled) - - -	66 <i>et seq.</i>	INHABITED PATTERN - - -	178
,, (soda) - - -	III		

	PAGE		PAGE
INLAY 64, 65, 71, 178, 198, 225, 226,		LEATHER - - - -	229, 230
234, 243, 296		,, (cut) - - - -	111, 112
,, (marble) - - - -	161, 225	,, (lacquered) - - -	128
,, (wood) - - - -	123, 158, 159	,, EMBOSSING - - -	115
,, OF PRECIOUS STONES, &c.		,, PAPER (embossed) -	128
	197, 198	LEATHER-WORK (Indian) -	162
,, IN VENEERS - - - -	224	LE GASCON - - - -	229, 230
INTARSIA - - - -	65, 66	LETTERS - - - -	73, 75
INTELLIGENCE - - - -	29	LIMERIC LACE - - - -	56
INTERPENETRATION - - -	169	LIMESTONE - - - -	105
IRON - - - -	28, 206	LINE - - - -	297 <i>et seq.</i>
,, (cast) - - - -	109	LINEN (printed) - - -	48
,, (wrought) - - - -	109	LINENFOLD - - - -	81, 82, 241
IRON-FOUNDING - - - -	110	LINES AND DOTS - - -	50
IRONWORK (Medieval) -	164 <i>et seq.</i>	LOCAL CONDITIONS - -	105, 168
ITALIAN - - - -	105	LOCK-PLATES - - - -	108
,, INTARSIA - - - -	65, 66, 71	LOCKSMITH (the) 108, 171, 207, 272	
,, MAJOLICA - - - -	291, 294	LOGIC - - - -	24
ITALICS - - - -	75	LOMBARD CAPITALS - -	75
IVORY - - - -	106, 159, 161	LOOM (the) - - - -	23, 133
,, CARVING - - - -	106, 108, 197	LOOSENESS - - - -	117
		LOUVRE (the) - - - -	4
JAPANESE FRETS AND STENCILS	208	LUSTRE - - - -	128, 249
,, HANDSCREENS - - - -	20	LYONS SILKS - - - -	46
,, POTTERY - - - -	293		
JAVANESE WORK - - - -	136	MACHINERY - - - -	132
JEWELLERY - - - -	126, 239	MANUFACTURER AND ARTIST 137, 138	
JOINER (the) - 17, 81, 99, 241, 272		MARBLE - - - -	48, 101, 105, 179
,, AND CARVER - - - -	242	,, INLAY - - - -	161, 225
JOINERY - - - -	130	,, MOSAIC 120 <i>et seq.</i> , 130, 257	
JOINTING - - - -	61	,, PATTERN-WORK - -	123
		MARbled GLASS - - - -	66 <i>et seq.</i>
KETTLE (bronze) - - - -	20	MARQUETRY - - - -	223, 296
KNIFE - - - -	99, 112, 188	MARRIOTT (FRED) - -	250
KNOCKER - - - -	28	MASSÉS - - - -	266
		MATERIAL - 25, 26, 76, 87, 303	
LABOUR-SAVING SHIFTS -	239, 240	,, (appreciation of) -	28
LACE - 52 <i>et seq.</i> , 126, 214, 215		MAYEUX (M. HENRI) -	274
LACQUER - - - -	244, 254	MECHANICAL EXECUTION -	132
LACQUERED LEATHER - -	128	,, PRECISION - - - -	123
LACQUER-WORKER (Indian)	9	METAL - - - -	94, 108, 125
LAIID-WORK - - - -	44	,, INCRUSTATION - -	233
LATHE (the) - - - -	130	,, WORK - - - -	104
LATTICE-WORK - - - -	208	MICHAEL ANGELO - - -	268
LEADING - - - -	301, 303		

	PAGE		PAGE
MINUTE DIAPERING - - -	87	PANELS - - - - -	269, 271
MODELLED TILES - - -	64	PARTNERSHIPS - - -	241 <i>et seq.</i>
MODELLING 98, 102, 115, 125, 249		"PATCHING" - - -	52
"CLAY - - -	117	PATCHWORK - - -	64, 65
MORRIS (Wm.) - - -	48, 262, 295	PÂTE-SUR-PÂTE - - -	151
MOSAIC - - -	64, 65, 134, 252	PATTERN - - - - -	58, 159
" (Cosmati) - - -	123, 180	" (unpremeditated) - - -	78, 80
" (geometric) - - -	123	" ON PATTERN - - -	50
" (glass) - - -	123, 252	PATTERNS (big) - - -	48
" (marble) 120 <i>et seq.</i> , 130, 257		" (circular) - - -	278
MOULD (the) - - -	108, 109	PAVEMENT - - - - -	130
MOULDINGS - - - - -	91	PENWORK - - - - -	75
MULLIONS - - - - -	269	PERSIAN EARTHENWARE - - -	50, 294
		" POTTER (the) - - -	9, 294
		" TILE-WORKER - - -	117
NATURAL FORM 12, 36, 282, 287, 299		PIERCED WORK - - -	203, 207, 208
NATURALISM - - - - -	283	PILLOW LACE - - - - -	54, 87
NATURE - - - 12, 134, 282 <i>et seq.</i>		"PINNING ROLLER" - - -	48
NEEDLEWORKER (the) - - -	41, 134	PLAIN GROUND - - -	48, 180
NET - - - - -	54, 56	" SURFACE 99, 174, 180, 181	
NIELLO - - - - -	189, 192	PLASTER WORK (Moorish) - - -	187
NORMAN - - - - -	105	"PLIQUE À JOUR" - - -	198
		"POINTILLÉ" - - - - -	229
OBEDIENT ORNAMENT - 267 <i>et seq.</i>		PORCELAIN - - - - -	93, 294
OLD WORK - - - - -	29	PORTLAND VASE (the) - - -	238
ON-GLAZE COLOUR - - -	153, 154	POTTER (the) - 9, 78, 93, 128, 183	
ONLAID CLAY - - - - -	238	POTTERY - - - - -	23, 127, 141
" FRETS - - - - -	224	" COLOUR - - - - -	292, 293
ONLAY - - - - -	164	" PAINTING - - - - -	153
OPUS ALEXANDRINUM		PRECISION - - - - -	302
120 <i>et seq.</i> , 180, 226, 296		PRIMITIVE WAYS OF WORKING 2, 29	
ORIENTAL EXUBERANCE - 175 <i>et seq.</i>		PRINCIPLES OF OLD WORK - - -	10
ORIGINALITY - - - - -	5	PRINT - - - - -	75
ORNAMENT 48, 71, 87, 125, 172, 173, 181, 281 <i>et seq.</i> , 297, 309		PRINTED COTTON - - -	48, 50
ORNAMENT (obedient) - 267 <i>et seq.</i>		" LINEN - - - - -	48
" AND PLAIN SURFACE		" WALL-PAPER - - -	48
172, 181		PRINTER - - - - -	76
OUTLINE - - - - -	266, 298 <i>et seq.</i>	PRINTING (cotton) - - -	50, 295
" (raised) - - - - -	62	" (wall-paper) - - -	51, 52
		" IN DYES - - -	48, 52, 295
		PROCESS (<i>see</i> Conditions).	
PAINTER AS DESIGNER (the) 133, 134		PROPORTION - - - - -	264, 266
PAINTING - - - - -	125, 250	PRUNTS - - - - -	149, 150, 234
" (pottery) - - - - -	153	PUNCH (the) - - - - -	112, 113
PALETTE (the possible) - 292 <i>et seq.</i>		"PUNTO IN ARIA" - - -	52

	PAGE		PAGE
QUILTING - - - -	113	SOLO (M. L.) - - -	151, 152
		SPANISH TILES - - -	62
RAFFAELLE'S CARTOONS - -	133	SQUARE MESH - - -	41
RAISED OUTLINE - - -	62	STAINED GLASS 244, 262, 295, 301	
RELIEF - 98, 151, 248, 249, 262		STENCILLING 208 <i>et seq.</i> , 223, 225	
RENAISSANCE - - - -	105	" AND FRETWORK	
REPETITION - - - -	281 <i>et seq.</i>	" 208, 209	
REPOUSSÉ - - - -	113, 151	STENCILLER (the) - - -	9, 213
" RÉSEAU " - - - -	54	"STEP" - - - -	46
" RESIST " - - - -	50	STITCHES - - - -	54, 58
RETICENCE - - - -	130	STONE - - - -	104, 105
ROLLER PRINTING - - -	50	" CARVING - - -	103, 104
ROMAN JAR - - - -	19	" " (Romanesque) -	180
" LETTERS - - - -	75	" " (Late Gothic) -	126
ROOF - - - -	269	STONEWARE 93, 145, 183, 238, 239	
RUDENESS - - - -	136	" (Japanese) - - -	48
RUSKIN - - - -	264	STRAPWORK - 113, 178 <i>et seq.</i> , 229	
		STRIPES - - - -	78, 279
		STYLE (<i>see also</i> Historic Style)	
SALT BOWL - - - -	100	72, 73, 91, 125	
SANDSTONE - - - -	105, 188	STYLUS - - - -	75
SCIENCE AND ART - - -	138, 139	SUPPLEMENTARY PROCESSES -	141
SCRATCHED WORK - - -	183	SURFACE - - - -	113, 114
SCRIBBLE - - - -	50	SYMMETRY - - - -	261, 262, 272
SCRIPT - - - -	76		
SGRAFFITTO - - - -	182, 185, 187	TANKARDS (English) - - -	19
SHADING - - - -	46, 262	TARTANS - - - -	80
SHAPE AND USE - - - -	18, 19	TEACHING - - - -	30, 31, 139, 261
SHAPES (glass) - - - -	146	TECHNIQUE - - - -	88, 89
" (thrown) - - - -	143	TERMINAL HEADS - - - -	108
" (turned) - - - -	143, 144	TESSERÆ - - - -	257, 259
SHAPING - - - -	16	TEXTURE - - - -	46, 48
" SHEERINESS " - - - -	52	THROWING - - - -	93, 141, 143, 144
SHODDY - - - -	46	TIES - - - -	210, 211, 214
SILK DAMASK - - - -	86, 301	TIFFANY (Mr LOUIS) - - -	246
SILKS (Lyons) - - - -	46	TILES - - - -	61 <i>et seq.</i>
SILVER - - - -	26	TINT - - - -	50, 54
" (beaten) - - - -	114	TONBRIDGE WARE - - -	65, 66
" WORK - 19, 113, 114, 179		TOOL (the teaching of the) -	70 <i>et seq.</i>
SILVERSMITH AND GLASSBLOWER		TOOLING (bookbinder's) 84, 126, 127,	
245, 246		178, 229, 247, 303	
" SLIP " - 117, 148, 149, 238, 249		TOURNEL (M. DAUMONT) - -	245
SLIP PAINTING - - - -	150, 151	TRADITION - - - -	2, 89
SMOOTHNESS - - - -	135	TRANSLATION - - - -	69
SODA GLASS - - - -	111		

	PAGE		PAGE
TRANSLUCENT ENAMEL - -	200	WALL-PAPER - - -	48, 289
TRANSPARENT GLAZE - -	147	,, (French) - - -	129
TREATMENT 8, 9, 10, 33, 71, 78, 81,		,, PRINTING - - -	51
124, 125, 284, 286		WEAVER (the primitive) - -	78
TURNED SHAPES - - -	143, 144	WEAVING - - -	23, 39, 40, 44
TURNING - - -	130, 144	WHEEL (the) - - -	93, 141, 142
TYPE - - -	75	WINDOW LIGHTS - - -	269
		WIRE INLAY - - -	226
UNDER-GLAZE COLOUR - -	153	WOOD - - -	48, 100, 103, 206
UNPREMEDITATED PATTERN	78, 80	,, CARVING - - -	99 <i>et seq.</i> , 188
USE - - -	17, 18, 19, 91	,, ,, (French) - - -	102, 179
		,, ,, (German) - - -	103
VAGUE FORMS - - -	300, 301	,, INLAY - - -	123, 158, 159
VALUE OF PLAIN SURFACE -	99	WOODEN LATTICE - WORK	
VARIETY - - -	262, 264, 266	(Japanese) - - -	208
VASE DECORATION - - -	279 <i>et seq.</i>	WOODEN VALLANCES (Arab) -	207
VASE-PAINTING (Greek) -	291	WOODWORK (Elizabethan) -	126
VELVET - - -	46, 48, 86, 310	WORKMANLIKE INSTINCT -	130
,, (cotton) - - -	48	WORKMANLIKENESS	
VENEER (inlay in) - - -	224	132, 134, 135, 139, 152	
VENETIAN POINT - - -	52	WOVEN STUFF - - -	50, 288
VENICE - - -	71	WROUGHT IRON - - -	109

UNIVERSAL
LIBRARY



136 857

UNIVERSAL
LIBRARY